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GROUSE & GROUSE MOORS

AGENTS

AMERICA . .	THE MACMILLAN COMPANY 64 & 66 FIFTH AVENUE, NEW YORK
AUSTRALASIA	THE OXFORD UNIVERSITY PRESS 205 FLINDERS LANE, MELBOURNE
CANADA . .	THE MACMILLAN COMPANY OF CANADA, LTD. ST. MARTIN'S HOUSE, 70 BOND STREET, TORONTO
INDIA . . .	MACMILLAN & COMPANY, LTD. MACMILLAN BUILDING, BOMBAY 309 BOW BAZAAR STREET, CALCUTTA



SPRINGTIME ON THE MOORS.

83416

GROUSE AND GROUSE MOORS

BY

GEORGE MALCOLM, F.S.I.

AND

AYMER MAXWELL

83416

WITH 16 FULL-PAGE ILLUSTRATIONS IN COLOUR

BY

CHARLES WHYMPER, F.Z.S.



LONDON

ADAM AND CHARLES BLACK

1910

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By GEORGE MALCOLM

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MOORS
AND THEIR MANAGEMENT

BY
GEORGE MALCOLM



D. White

GLENQUOICH LODGE, INVERNESS-SHIRE

Visited by King Edward VII. for deer-shooting in 1904 and 1905

THE GROUSE

CHAPTER I

INTRODUCTORY AND HISTORICAL

FROM the point of view of the naturalist it is proper to include with the grouse as popularly known in this country various other members of the Tetraonidae family, found in abundance in both the new and the old world. But here we shall be almost exclusively concerned with the red grouse (*Lagopus scoticus*), which is indigenous to Britain. To this, its circumscribed locale, is no doubt to be attributed in some degree the great request which the red grouse commands from those who occupy their autumnal leisure in wild sports.

Lagopus scoticus is an attractive bird from all points of view. He is interesting

to behold ; beautiful in plumage ; graceful in movement ; devoted and courageous in defence of his young ; while, as an object of sport, he has no equal in this country among the feathered tribes.

The red grouse is closely connected with the willow grouse (*Lagopus albus*) of the Continent, and has family relationships also with the Capercaillie, Black-cock (or black grouse), and Ptarmigan, which, speaking comprehensively, have much in common with the red grouse in their habitat and life-history. Though found in the British Isles only, the red grouse is widely distributed within this territory, and most numerous in Scotland. The plumage of the male, which measures about 16 inches, is predominantly red, with points of black and white. That of the female, which is smaller in size than the male bird, is somewhat lighter coloured, though also prevaiingly red. The colours of these birds, it may be mentioned, vary somewhat in different localities under the influences of environment, and

that law of nature, universal among wild beasts and fishes as well as birds, whereby they are better enabled not only to support their daily existence, but to shield themselves from attack and destruction.

It is proposed here to refer to the antiquity of sport in our country, and its gradual rise to the dimensions and importance it holds in the present day. The extent, management, and value of grouse moors will also be noticed ; and the habits of grouse in health and disease. The mysterious ailment, popularly known as the grouse disease, which periodically attacks this game-bird, with decimating virulence, and is at present the subject of scientific investigation by a committee of experts under the Board of Agriculture and Fisheries, will also receive some notice. Some observations will likewise be made on measures for the protection of grouse ; on heather and heather-burning ; and on the vexed question whether grouse do better, and are more numerous, when

reared on moors divested of sheep, than on moors where more or less full stocks of sheep are kept all the year round.

While in all ages unmistakable traces are to be found of the devotion of the human race to what is so well known in our day under the generic name of sport, and while systematic records of this propensity in man are early to be met with, it is scarcely beyond living memory that the vast fields of sport by rod and gun of the present day were begun, and have gradually risen into that importance, complexity, and profit which now distinguish them.

Without dwelling too long on the earlier evidences of the antiquity of sport, which is to all sportsmen a fascinating study, it will be well, preparatory to dealing with the particular item of the sportsman's repertory which we are here concerned with, to give some account of the genesis of the chase in our own country, and of the conditions under which it has been followed and controlled

from the beginning till now. We shall find that it is less than a century ago since the little animal, with respect to which these pages are occupied, was much regarded as a contributor either to the pleasure or the material profit of the classes who now take their delight in his pursuit, or find their advantage from the increasing revenues of the moors which are the habitat of this charming member of the feathered world.

It has been said that the genuine "sportsman" is produced in Britain alone. For what he stands for in relation to our subject he is unknown in other countries. While this was never perhaps an absolutely correct statement, and is still less accurate now, it nevertheless was true through many ages, and still is so in a modified degree, that wherever wild animals were pursued and killed for sport, this was mainly done by members of the Anglo-Saxon race. It, however, cannot be any longer said that this peculiarity applies to British subjects

only. In the peoples of America and Canada a penchant for the pleasures of rod and gun has lately had a rapid development among the well-to-do and leisured classes. The manors of England as well as the moors and deer forests of Scotland are eagerly sought by a goodly number of affluent Americans, who can afford to pay, and do pay, for the shooting ; great rents are obtained for these places, to the substantial advantage of many besides their immediate owners.

It may be advisable here to distinguish between those who shoot for sport alone—for the pleasurable excitement, and the health-giving exercise and recreation which it affords—and those who have done so for their own security merely, or for food and clothing. The chase is necessarily in all unsettled regions antecedent to civilisation. Noxious and dangerous animals must be eradicated for safety, if not for food, prior to reclamation of the soil for the yield of its natural fruits to the support of man. That,

therefore, which was a necessity of human welfare could not be accounted sport as we now understand the term. In which category are we to place the "mighty hunter" Nimrod, the prototype of all his successors? What he hunted; how he hunted, the Scriptures sayeth not, and we are left to conjecture. In the earliest ages the dog was probably the chief, if not the sole assistant of man in his quest of wild animals; but, as time went on, various manual weapons for the destruction of birds and beasts were doubtless invented and used. Clubs, darts, arrows, springs, traps, and nets were all brought into action, until in process of events the fowling-piece was invented, and has been evolved from the rude matchlock to the highly complex, beautifully finished, and deadly effective guns and rifles of our own day. None of the earlier instruments and methods of the chase, with the exception perhaps of hawking or falconry, which are of high antiquity and go back to the Saxon occupation of Britain, could have

been of avail for assault on our wary and nimble grouse.

Who has not heard of the ancient forests which in England from the days of the Conqueror, if not earlier, and in the reigns of many early Scottish monarchs, were secluded for the diversion of the sovereigns and their nobles, and hedged around by many grievous and barbarous laws—*Leges Forestarum*—the rigour of which endured for centuries. A “forest,” it may be stated, differed from a “chase” in those times in respect that the former was the exclusive prerogative of royalty, and alone was subject to the full effect of the forest laws. A “chase” was generally of smaller extent, might be held by a subject, and was only protected by the common law.

The forest of these early days has been described as a certain territory or “Circuit of woody grounds and pastures, known in its bounds as privileged for the peaceable being and abiding of wild beasts and fowls of forest, chase, and warren, to

be under the king's protection for his princely delight, bounded with irremovable marks and meres, either known by matter of record or prescription; replenished with beasts of venery and chase, and great coverts of vert for succour of the said beasts; for preservation thereof there are particular laws, privileges, and officers belonging thereunto."

Until the making of *Carta de Foresta* by Henry III. in 1224, confirmed by Edward I. in 1229, forest offences were punished in the severest manner—sometimes by death itself—at the mere will of the sovereign. But by this charter many of these hunting preserves were abolished, and many others were shorn of their more oppressive privileges. These cruel laws were further ameliorated by successive monarchs, whether of their own clemency or under political pressure, and may now be said to be wholly obliterated from the statute-books.

Though it does not appear that the Scottish kings addicted themselves to the

same extent as the Norman monarchs of England to the pastimes of foresting, or that the same barbarous fencing of the sanctity of the royal enclosures was generally resorted to in Scotland, there is still ample evidence of the existence of several royal forests, and we have numerous detailed descriptions of royal or state visits to these. The sixteenth century has, indeed, upon its records many Acts of the Scots Parliament for the seclusion and protection both of game and wild deer, which by this period must have been coming into note, judging by an observation of Sir William Blackstone :

From this root has sprung a Bastard slip known by the name of the *Game Law*; but with this difference, that the forest laws established only one mighty hunter throughout the land, whilst the game laws have raised a little Nimrod in every manor.

It has been remarked that in Scotland these early laws were administered with less selfishness and cruelty than in the sister country. But this must be qualified

by an admission that the Scots statute-book was disgraced by at least one Act, 1551, cap. 9, "anent them that schuttis with gunnis at Deare and Wildefowle," which probably no Norman enactment surpassed in severity, for it actually inflicted the penalty of death, as well as confiscation of movables, upon such as shot at these wild animals in the royal preserves—an Act, however, which by 1686, if not earlier, had fallen into desuetude. The jealous protection extended to the royal forests in Scotland is further exemplified by the Act of James VI., 1617, c. 18, which proceeds upon the complaint "that the Forests within the Realme are altogether wasted and decayed by Shielings, pastouring of Horses, Mares, Cattel, Oxen, and other bestial"; and by a representation made by the Court of Session to the king "against granting of new forests as prejudicial to the King's old forests and to his lieges."

In 1528 King James V. of Scotland

“made proclamation to all lords and barons, gentlemen, landwardmen, and freeholders, to compear at Edinburgh with a month’s victual to pass with the King to danton (subdue) the thieves of Teviotdale, etc., and also warned all gentlemen that had good dogs to bring them, that he might hunt in the said country. The Earl of Argyle, the Earl of Huntley, the Earl of Atholl, and all the rest of the Highlands, did, and brought their hounds with them to hunt with the King. His Majesty therefore passed out of Edinburgh with 12,000 men, and hounded and hawked all the country and bounds. Next summer he went to hunt in Atholl, accompanied by Queen Margaret and the Pope’s ambassador, where he remained three days most nobly entertained by the Earl.” There is also the better-known case of Queen Mary of Scotland, who, with great state and circumstance, “took the sport of hunting in the forest of Mar and Atholl in the year 1563.” Minute

particulars of this great hunt are given by Barclay in his *Defence of Monarchical Government*. In closing these notices of royal hunts it may be mentioned that Queen Mary's great rival and relative, Elizabeth of England, seems not to have disdained on occasion to indulge herself in the same diversion. In 1595 she is recorded as having given her royal presence to a deer-chase at Cowdrey Park.

How far these royal visits, associated as they were with great operations of the chase, such as have been referred to, were visits of honour paid by the sovereigns to the more distinguished and powerful of their nobles, for which, as is still observed, extensive and costly preparations were made for the entertainment of the royal visitors, or were subordinate to a real necessity of periodically resorting to a rigorous campaign on a gigantic scale against the denizens of these vast and secluded forests, whose depredations may now and then have become troublesome,

it is very difficult now to say. Love of sport has been a national characteristic in all ages, and, as has been said, has had its highest development in our own country. Complimentary huntings seem to have been often given, as they still are, on the visits of friends. There seem also to have been occasions in former centuries when the heads of clans or tribes, accompanied by many of their followers, met at appointed rendezvous, ostensibly for purposes of sport, but where and when other business, such as the settlement of inter-tribal differences, was discussed, and if possible adjusted. Nor have the forests and the chase been without their romantic and poetic celebrations. One of these "nature's bards," Duncan (Ban) M'Intyre, who flourished in the latter half of the eighteenth century in the mountainous region bordering the counties of Perth and Argyll, has had the honour paid to his gifts and memory of having had one of his most beautiful productions, *Spring in Bendouran*, originally written in the

Celtic language, exquisitely redone in English by no less a personage than the younger Disraeli, afterwards Lord Beaconsfield. Taylor, "the Water Poet," who was born in 1580; Scott, in the opening stanzas of *The Lady of the Lake*, and in many other passages of his inimitable works; and many other authors, have sung of the pleasures of sport in the uncultured but charming situations where it is still mainly followed.

The unjust and cruel laws by which Norman kings of England and Scottish monarchs arrogated to themselves exclusive privileges of sport, were, as we have seen, greatly ameliorated by the monarchs of the thirteenth century. Yet these laws, and such of them as survive in our own day, retain some remarkable features of their feudal origin. Monopoly of gaming and all higher classes of field sports, which were in very early periods vested in the sovereign simply by arbitrary rule, were at later dates conferred by him on his barons and landed gentry, or were in

many instances claimed by them of their own equally arbitrary will, which they felt powerful enough to enforce, often under circumstances of extreme oppression.

By an Act of Richard II. (1389) possession of property was made the basis or necessary condition of privilege of killing game; and such as possessed not this qualification, and kept hunting dogs or resorted to any other methods of killing game, were liable to one year's imprisonment. But this law of property qualification was modified from time to time in succeeding reigns, until in 1831 no fewer than twenty-seven statutes applicable to England were abolished altogether. In Scotland the "landed qualification" still exists under an old statute (1621), which enacts that "no man hunt or hawk" unless he be possessed of a ploughgate of land in heritage, and the privilege of gaming rests with the owners of heritable property, modified by the statute of 1880 commonly called the Ground Game Act. In modern practice, however, all who have

permission from the landowner, and conform to fiscal requirements, may shoot game with the same freedom as the owner of the soil.

Possession of this delegation and payment of the licence duty attached to this form of sport distinguishes the legitimate sportsman from the poacher as far as the sanction of law is concerned. Into the relations which, by complex and, as some think, still somewhat harsh restrictions, differentiate the legalised sportsman from the trespassing poacher, it is, however, inadvisable here to enter. It is a peculiarity or anomaly of the Game Laws that what they are designed to protect is not property but privilege. It may be maintained that wild birds and beasts on an estate are the growth of that property, having been cared for and perhaps fed by its owner. Nevertheless he cannot reclaim these from a neighbouring estate, should any of them go there, as he can farm stock or any kind of domesticated animals. It is in this that the poacher finds some,

though inadequate, excuse for the illicit exercise of his sportsman instinct. But there is unfortunately too much reason to believe that were legal protection of game entirely abolished, even if a rigorous trespass law were maintained, game itself would soon be extirpated. This, at least, has been the experience of every country where there is an entire absence of game protection.

CHAPTER II

ECONOMIC VALUE OF GROUSE MOORS

IT has been stated that the popularity of grouse and other shootings, as we now know them, is of comparatively recent date. All through the centuries when, as we have seen, the pastime of hunting both feathered and four-footed wild animals was an addiction of the monarchs and their great feudal lords, it is not recorded that either forest or chase, within which these sports were pursued, possessed any monetary value, or were in any respect the subjects of commerce or contract. It was not till the first quarter of the nineteenth century was well advanced that letting of shootings for hire could be traced, and up to the middle of this century the rents obtained for even exclusive and very extensive

shooting rights were quite insignificant. But gradually, as last century wore on, the attractions of sport on the moors were increasingly sought after by the landed gentry and other persons possessing wealth and leisure enough to enable them to indulge in this form of out-of-door pastime. From the middle of last century the fascination of these possessions have taken a passionate hold of great numbers of the wealthier classes, and have become rooted in the attachment of large sections of society. As a medium of recreation and healthful open-air life modern shooting shows no signs of waning popularity. The romantic poesy and tales of Sir Walter Scott, and certain glowing descriptions of not much earlier date by other writers, of the wonderful scenic beauty and grandeur of the Scottish Highlands—till then hardly known to more than a small number of adventurous persons—awakened a widely ranged desire to visit regions which in our own land were still strangely unfamiliar to the multitude, and invested with not a

little mystery. The glamour of Scott's genius operating through his immortal writings undoubtedly greatly contributed to arouse this feeling, and maintained a curious desire to have closer acquaintance with the romance surrounding these mountainous regions, until it was dissipated by the march of modern means of locomotion, which enabled all who desired to do so to familiarise themselves at trifling expense, not only with the long-unvisited Scottish Highlands, but with the remoter portions of His Majesty's British dominions wheresoever situated.

Almost coincident with this development of the love of community with the charms and beauties of natural scenery—the arresting solitudes and towering mountains of the Scottish Highlands—arose a conviction of the adaptability of these vast heathery moors, in some parts of England, as well as in the wider areas of Scotland, to a larger use as the homes of the red grouse and other varieties of game. Then it was that

their owners awoke to a perception of their value, and occupiers flocked to them as delightful autumnal retreats for sportsmen and their families and friends. Among these were counted from the first no inconsiderable number of the members of both Houses of Parliament; nothing could be better fitted or more effectual to revive the jaded energies of the worn-out legislator than contact with the bracing breezes and the mild excitement of shooting grouse. The letting of grouse moors is still much affected by the course of parliamentary business, odd as some may think the conjunction. A good letting season, or the reverse of this, to a considerable degree hangs on the point whether Parliament shall cease from its sessional labours in time for celebration of the day of St. Grouse. This event is generally prophetically known some time in advance. Autumn sessions of Parliament are abhorred by Highland lairds and other owners of grouse moors. In this aspect of the matter it may be

said that the unprecedentedly prolonged session of 1909 was one of the most disastrous on record, many of the choicest and most highly rented shootings having, from the cause just named, either been without tenants at all, or let at seriously reduced rents. The unfortunate effects of this on the neighbourhoods where it occurred will be afterwards shown.

When the value of shootings began to be appreciated, and were systematically let, small rents only were obtained for them; incredibly small when contrasted with the rents obtained now for the same subjects. Instances might be quoted of early rents, not exceeding £100 to £200, and even less, which are now tenfold increased. In one case well known to the writer, the appreciation in less than a century has for many years been no less than thirty times the original rent. It is true that "better value" is now obtained. There is more sport, closer protection, more accommodation, more accessibility, and altogether more luxury and exacting service. But

with, on the other hand, less freedom perhaps, less isolation, and withdrawal from the worries and tyrannies of modern social life. The equipments of a first-class moor or deer forest are now nearly all on a very elaborate and expensive scale. Nothing in the economy of sport in the British Isles exhibits a more striking contrast when the past is compared with the present. Few and simple were the requisites of the shooting tenant of fifty years ago; while a description of the establishment and outfit of the present day of even a far-away Highland shooting lodge would be enough to disturb the rest of many hardy gentlemen sportsmen, whose simple, homely, natural lives and modest necessities remain in the memories of some of their youthful contemporaries. Going still farther back, though to a far less remote period than the monarchical and great feudal hunts before spoken of, great Highland chiefs, when they sallied out to shoot over distant parts of their estates, were content to abide in dwellings

which the plutocratic sporting tenant of our day would account a social impossibility. They thought it no hardship, but an agreeable variation of their normal domesticities, to sleep in a wattled hut in the high corrie or open moor, and live on the produce, from day to day, of the gun.

Now, it is very different. Your first-class sporting tenant—English or American; never Scottish or Irish, and seldom of any of the continental peoples—gives liberally for his privileges, and exacts liberal advantages besides the bare right to shoot. The lodge must be commodious—furnished, and kept almost up to the standard of metropolitan modern life. Electric lighting, garage for motor-cars, facilities for yachting and salmon fishing where practicable, and many other luxuries, or, as some would say, superfluities, are now looked upon as indispensable; while every department of the internal economy of the house, especially the culinary arrangements,

must be in quite first-rate order and capacity.

If there have been differences of view of the utility and ethical bearings of the extensively ramified love and practice of sport by the shooting of wild animals, so also are opinions at variance regarding the material or monetary value of these shootings. On various occasions Parliamentary Returns of the number, extent, and other particulars of deer forests have been supplied, generally at the instance of persons whose views were inimical to these institutions; but no corresponding information of an official character has ever been ascertained with respect to those shootings of which grouse form the most conspicuous and most valuable element. No doubt a methodical examination of all the County Valuation Rolls, prepared for purposes of assessment to rates, would be a useful contribution to a solution of this question; but as in these voluminous records the different kinds of property and tenancy are not reduced to

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a public classification, the inquiry would be a very laborious one. Nor would it be complete or conclusive as an index of the true monetary value of the shootings of our country, for the reason that the amounts placed opposite *shootings*, as their present annual value, are really only nett values after deducting outgoings and expenses which the proprietor must meet in order to maintain the subjects in repair and in general conformity with the bargain between him and his shooting tenant.

But in Scotland, at all events, where shootings are not only more extensive and valuable, but receive more attention as a calculated source of income than in the sister countries, there are certain other means of computing their value which probably cannot be very wide of the mark. In the attempt to arrive at this value, which will presently be made, facts within reach warrant the statement that the figures adduced are not too large.

It is computed that there are, of all classes, 3354 shootings in Scotland which

are either regularly let or shot over by their owners; of these, 3157 are grouse and general shootings, and 197 are deer forests, which also contain a certain number of grouse and other game. If the average rent of a Scottish grouse moor and other shootings, exclusive of deer forests, be taken at £250, the *cumulo* annual rental will be £789,250.

As to other expenses, it is sometimes said in a rough generalisation of the expenses of shooting tenants that each brace of grouse costs £1. This, upon the foregoing calculation of rent value, would mean a grouse crop of 1,578,500 killed in a single season. But this is a fallacious or, at best, haphazard and uncertain factor of calculation, and probably shows a result in excess of the actual produce of the moors. It assumes a uniform ratio of bag not only on all moors but in all years, which is self-evidently unreliable.

A much better index of the amount of the tenant's expenses of all kinds, apart from rent, is, that the expenses may be

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reckoned as equal to the rent. On not a few large shootings, where the extent and fructibility of the shooting enable a large number of guns and guests to be entertained, the expenses are correspondingly large, and probably exceed the estimate of being equal to the rent. On the other hand, there are many others where these conditions do not obtain, and the costs are no doubt less than the rent. But in taking this standard as the means of expenses over all the shootings, we have a further sum of £789,250.

To these amounts have to be added the rents of 197 deer forests, which, speaking generally, are larger and more expensive than grouse shootings, and will certainly not be over-estimated in rent at £800 on the average, for many of them reach £3000 and some £4000. Thus, 197 deer forests at £800 come to £157,600 in rents, and a similar amount in expenses, for the working cost of an average deer forest is certainly not less than that of an average grouse moor.

Further, no one is permitted to shoot game or deer, or even to sell these, without contributing to the imperial revenue in the shape of game, gun, and game-dealing licences. In Scotland 9419 game licences, 19,963 gun licences, and 411 game-dealing licences were issued during the last fiscal year, which together brought £34,166 to the imperial exchequer.

It may be well to reproduce in tabular form the figures just stated as the estimated annual expenditure in connection with Scottish shootings.

Average rent of 3157 grouse and general shootings at £250 each .	£789,250
Average expenses of 3157 grouse and general shootings at £250 each .	789,250
Average rent of 197 deer forests at £800	157,600
Average expenses of 197 deer forests at £800 each	157,600
	<hr/> £1,893,700
Add amount of excise revenue in year 1908-9 for game, gun, and game- dealing licences issued in Scotland	34,229
Total of ordinary expenditure .	<hr/> <hr/> £1,927,929

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The pecuniary benefits which Scotland derives from her shootings are not all embraced in these figures. Many shooting tenants are leaseholders for more or less prolonged periods. They become attached to the localities where year after year they temporarily reside; and large amounts are expended by them in constructing houses, roads, fences, and other improvements of a special nature over and above the ordinary costs of maintaining their establishment. Some examples of this, which directly benefit all classes of the local population, may be adduced under another branch of our subject.

Nor should it be forgotten that these remarks and figures do not cover the whole field of our survey in estimating the annual turn over of money in connection with the shooting interests of the United Kingdom. The figures given above refer to Scotland alone. We have no means of arriving at results on a similar basis applicable to England, Wales,

and Ireland, but there are very valuable grouse moors elsewhere in the United Kingdom, in the north of England especially.

Attached to not a few grouse moors are stretches of salmon fishing. These being perhaps outwith our special subject, have not been reckoned in our estimate of sporting values ; but it may be stated in passing that the rents derived from salmon fisheries in Scotland cannot be under £200,000 per annum. In the last Report of the Inspector of Salmon Fisheries for Scotland, the rental of these for 1908 is given at £121,521, which “takes no account of the Beaulys—of the sporting value of the rivers in Sutherland, not ascertainable separately from shootings, and of the large number of small west coast districts where no Boards are established” (Report, page 8).

Enough has probably been stated to have made it plain that, viewed economically, we possess in our grouse and other shootings a very important property, so



A Modern Lodge, Fife, Fife

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valuable in many parishes that their sudden obliteration (if that can be supposed possible) would bring corporate bankruptcy on these parishes, as well as on many individuals. In many, it may be said in most, Highland parishes it is from sporting subjects that the main portion of the rates, the sinews of local government, is derived. In many parishes this is the case to the extent of one-half of the whole assessment, and in some to even a larger extent. Relief of the burden of taxation, both local and imperial, thus afforded to all classes is self evident.

Nor do these possessions militate in any respect against any interest connected with the national food-supply. So far as grouse are concerned, the opposite is the case, for they co-exist with sheep and cattle on the same ground, and never has it been said that they have any prejudicial effect on farm stock. As regards deer forests (where there are also grouse), evidence taken by various Royal Commissions for inquiry, *inter alia*, into this

point, has established the fact that neither in respect of mutton nor wool has the clearance of sheep from deer forests had an appreciable effect on the national food-supply.

If the facts which have been here adduced are impartially considered, the only reasonable conclusion therefrom must be, that it would be a disastrous mistake to adopt means, however indirect, against the red grouse in Britain, its indigenous home.

CHAPTER III

MANAGEMENT OF THE MOOR

SMALL is the evidence that in the older days of grouse shooting much heed was given to the numerous points of management which are now very generally recognised and acted on as indispensable to successful grouse rearing. In this business, increase of knowledge and the results of the application thereof have been almost as great as in the domain of agriculture and other departments of rural economy. Looking back for no longer a period than about fifty years we shall find in the retrospect a very striking improvement in all that pertains to this branch of sport, and still more if we limit the survey to about half that period.

When grouse moors were first sought

after—just before the building of railways in Scotland—arrangements were primitive indeed, or seem to us now to have been so. Sixty years ago or thereby the annual invasion of the Scottish Highlands for the opening of shooting on 12th August was chiefly made by means of lumbering heavy old family carriages, now entirely obsolete. Processions of these antique vehicles, drawn by relays of hired horses with postillions, might be seen for weeks on the dusty roads, slowly threading their way to their respective destinations in the northern counties.

How different is the case now ! How much more rapidly and comfortably, as well as less expensively, is the exodus accomplished of the great sporting army from the metropolis and all parts of southern Britain to the captivating lodges and breezy moors of the north. Who that would fully realise this should read the charming sketch of the “Scotch Mail” by the late Mr. Stuart Wortley in the *Fur, Feather, and Fin Series*. “Exactly

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sixteen hours," said he, "from the time you were driving through Bloomsbury you have killed a right and left of Perthshire grouse, on a spot which fifty years ago would have taken eight days to reach, if even in those days there had been any one to try it." So, it may be added, is it nowadays with the sport of salmon angling. The fisherman in the metropolis or at his English country-seat keeps himself in touch by telegraph with the wilds of the far north. If, late in the afternoon, the verdict is "Come," our angler leaves London by the "Scotch Mail" aforesaid when the evening is well advanced. He slumbers comfortably throughout the night, and early next forenoon he is at the river-side, and probably has several salmon to his credit before luncheon.

So much for modern accessibility, which now must not be dispensed with. What a contrast to the former ways, when the old-fashioned sportsman of a former generation did at last laboriously reach his shooting quarters! What assured

prospect had he of a fitting reward for all his toils, time, and money? What methodical foreseeing preparations had been made to show him the sport for which he had ventured forth so far? Few and meagre indeed they generally were. The aged and leisurely keeper, after the usual salutations, being interrogated as to the state of the moor and the promise of birds, had little to say, and that little he was delivered of with difficulty. He was nothing if not non-committal. He was not without hopes, but these might be disappointed. He had been over the ground with his dogs, but he was not a believer in going among the birds very much before the guns went out. Yes, he had burnt some heather, but as usual weather had been unfavourable, and not much had he been able to do, and that little, he might have added, had been done much at random. In short, grouse moors forty or fifty years ago were pretty much self-managed. They were left almost in their untouched natural condition, with

little or no special adaptation to the rearing and holding in a healthy condition of a numerous stock of birds.

Now there has been an awakening to the possibilities of improvement; to the advantages of calculated intelligent management; and the necessity and value of unremitting attention to the moor throughout the whole year. All things have become new. A bare enumeration of the points in which the latest system of grouse-moor management differs from and excels all former systems, or perhaps we should say want of system, is enough to show how different is the new from the old. Standardisation takes the place of empiricism on every leading moor with most satisfactory results, which have more than justified the foresight, skill, and capital which have been employed in producing a change so beneficial.

Let us begin at the beginning. The first and most essential necessity of success is that the moor shall be under the care and skilled control of an active and

trustworthy head keeper. In the absence of this *sine qua non* many of the other requirements about to be stated are unlikely to receive adequate attention. Regularity and discrimination in the care and burning of heather; attention to supplementary sources of food for grouse; destruction of vermin; prevention of poaching; constancy of water-supply, and of supplies of gritty material where this is not found in the natural surface formation of the ground; removal of decomposing carcasses and other offensive matter from the ground, are all operations which lie directly within the sphere of the keeper's ordinary duties. There are other desiderata in which he may act only a secondary part, though he should always actively assist in these when practicable, such as the laying out of shelter belts of trees; the movements over the moor of bodies of sheep where such stock is kept; the placement of marks on wire fences and telegraph wires for the warning of birds on the wing from contact with these

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wires; and measures which may be arranged for suppressing the invasion of bracken. All these things are most important, and on all the great moors both in Scotland and England which have been distinguished by not only the great bags of birds obtained from them, but for a suggestive absence from them of grouse disease, they have received close and unrelaxing attention.

We have said that the first and most indispensable requirements of a well-managed and productive moor is a first-class gamekeeper. He may be the only one, or he may be chief among several, according to the size and importance of the moor; but he must have in his character elements which make him apt to learn—observant, receptive of new ideas, and ready to apply these in practice. He should not have passed middle life, and if a decade or two younger so much the better. His juniors, if he has any, should all be young, active, and keen in all that relates to their work. The head keeper

must have received a fair education, as nearly all the new race of keepers now have, and be able to express himself clearly by letter, and to keep simple accounts. It goes without saying that he must be proficient in all the technicalities of his avocation. He should, further, study the views and experiences of others as well as be a keen observer in the field on his own account. Most keepers of the old school, especially in the Highlands, have cherished a fine contempt for all book knowledge in their particular sphere of work. It is desirable that it should not be so, and it is believed that this attitude is fast passing away among the more intelligent and efficient men in the keeper's walk of life. It is well for themselves as well as for their employers that it is so, for great gain is to be derived by the self-taught man, however complacently he may estimate his home-made knowledge, by a study of the works of those who are acknowledged adepts in the theory and practice of game preserving and shooting.

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The modern up-to-date keeper has a real affection for his work. He should be of good temper, firm, never giving way to anger or severity unnecessarily. The more kindness and courtesy to others he can weave into his course of life and contact with his neighbours, both when on and off work, the more pleasant not only will be his own position, but the more safeguarded will be the interests of his master.

Having secured and installed a game-keeper of such endowment and equipment as we have endeavoured to describe, a short survey of the work falling to him to perform will be made. This will engage his unremitting attention if he proves faithful to his charge. For the diligent, honest keeper work lies to his hand every day of the year. Spasmodic activity, followed by periods of lethargy, thought sufficient in the past, will not suffice now.

It is the desire of every occupying sportsman to be the possessor of a fine stock of grouse, and this ought also to be the aim of his responsible keeper. But it

does not need stating that realisation of this desire demands the closest attention to a number of lines of management, of which the first and most indispensable is food. The food of grouse mainly consists of that widely diffused variety of heather known as ling (*Calluna vulgaris*). On the extent and quality of the heather on the moor hang success or failure when the shooting period arrives. So much importance is here given to heather and its treatment in relation to grouse, that a special analysis of this branch of management of the moor is made in succeeding pages, to which the reader is referred.

Heather, as the staple and ordinary food of grouse, is sometimes supplemented by blaeberrries and bilberries, and a growth of these berry-producing plants should be encouraged where opportunity is offered. In very hard weather, when the heather is laden with snow and becomes hardened by frost, it is necessary to disengage the frosted snow from the heather, which can be done by dragging an extended rope

along it. Failing clearance of the heather by this or other means, some modified form of artificial feeding must be resorted to, otherwise extensive migrations of birds may be looked for, and many of these migrants do not return to their original quarters. At such times, or indeed at any time, grouse do not disdain to partake of an occasional banquet of grain, and visit the nearest cornfields sometimes in inconvenient numbers and with unwelcome frequency. But more generally they find on the lower ranges of heath the food and comfort they are temporarily denied on the highest ground.

Vermin killing.—Our feathered favourite is, it is hardly necessary to say, exposed to attacks from many enemies. Of all these none is so deadly as the hitherto mysterious ailment which periodically decimates the grouse family. What "Grouse Disease" is, and what may be done for its prevention or cure, we may hope shortly to know from an expert and scientific Commission which has for

a protracted period been engaged in investigating the problem. Their report is now anxiously awaited. Definite light will then, it is expected, be thrown on this hitherto baffling trouble, and reliable conclusions for its eradication arrived at. The report will be noticed in the succeeding pages.

Grouse are also freely open to destruction from many beasts and birds of prey which it is the keeper's business to discover and counteract or destroy. Grouse and other game-birds are probably much more numerous now than in the older time when preserving was less attended to. Whether their foes have proportionally increased may be doubted; yet experience has often shown, both on land and sea, that when superabundance prevails in any form of animal or fish life an antidote is provided, and the "balance of nature" preserved by a proportionate increase of forms of predaceous life. A goodly number of beasts and birds of prey formerly plentiful are now rarely seen,

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and some are quite extinct; but, on the other hand, some living enemies of grouse are in greater force than ever. Among the latter are rooks, hooded crows, and gulls, also various varieties of the hawk tribe, which are constantly waging war on the unfortunate grouse either as devourers of eggs or strikers of the live bird.

The following is an authentic list extracted from the *Gazetteer of Scotland* of vermin trapped in Glengarry, Inverness-shire, between 1837 and 1840:—

11 Foxes	3 Honey buzzards
198 Wild cats	462 Kestrels
246 Marten cats	78 Merlin hawks
106 Polecats	63 Hen harriers
301 Stoats and weasels	6 Jer falcons
67 Badgers.	9 Ash-coloured hawks
48 Otters	or long-tailed blue hawks
78 House cats (going wild)	1431 Hooded crows
27 White-tailed sea-eagles	475 Ravens
15 Golden eagles	71 Fern owls
18 Ospreys	11 Hobby hawks
98 Blue hawks	275 Kites or salmon-tailed glebes
7 Orange-legged falcons	5 Marsh harriers
63 Goshawks	35 Horned owls
285 Common buzzards	3 Golden owls
371 Rough-legged buzzards	8 Magpies

From this list several may now be excluded as having entirely or almost entirely disappeared, such as marten cats, badgers, in Scotland at least, white-tailed sea-eagles, and ospreys, while certain others are only very rarely met with. It is sometimes stated that wild cats have also quite gone, but this is certainly not the case. Every year a certain number of unquestionably pure specimens of *Felis catus* are trapped in the north-western district of Scotland, extending from the northern part of Argyleshire to the northern border of Ross-shire, a territory which seems to be beloved by this fierce little creature.

The task of the modern gamekeeper in freeing his ground from beasts of prey and predaceous birds, or reducing their number and consequent destructiveness, has not been made easier by recent legislation. On the contrary he is greatly handicapped by the operation of the "Wild Birds' Protection Act, 1880," which consolidated and extended certain



THE EAGLES' NEST.

prior Acts for the protection, first of certain sea birds, then of certain wild birds, and afterwards of certain wild fowl which have a marketable or commercial value. By the Act of 1880 it is illegal to kill any bird during the breeding season from 1st March to 1st August, with certain exceptions in favour of the owner or occupier of land. The protection thus extended by law to a large number of wild birds, most of them with predaceous or theftuous instinct, is no doubt prompted by the desirability of preserving for scientific reasons certain species from extirpation, or the humanitarian motive of shielding them from wanton cruelty. But it may be questioned whether the protected existence of some of these animals is required, when their own defensive powers and fecundity are considered. Agriculturists and sportsmen alike protest that protection of many members on the list is a mistake, and that great damage to valuable crops as well as to edible animals results. Eggs

of certain birds are similarly made sacred, and the Act is enforceable by fines on conviction. The island of St. Kilda is exempted from the Wild Birds' Protection Acts, for there the support of the inhabitants is derived chiefly from the capture of sea-gulls, which breed in innumerable flocks on this rocky island, and afford both food and merchandise to their captors. The Secretary of State may by order vary or extend the close period under these Acts, a power which has from time to time been exercised, generally to amplify the protected list.

The following list comprises the wild birds with their eggs protected in the county of Inverness, which may be taken as typical of the general application of this law :—

WILD BIRDS' PROTECTION ORDER

1908

COUNTY OF INVERNESS

The "Wild Birds' Protection Act, 1880," shall apply to the following Wild Birds as if they had

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been included in the schedule to the said Act, viz. :—Bullfinch, Buzzard, Crossbill, Eagle (Golden), Eagle (Sea), Gray Lag Goose, Hen Harrier, Jay, Kestrel, Kite, Osprey, Peregrine Falcon, Pintail Duck, Quail, Scoter, Titmouse (Crested), Tufted Duck, provided that this clause shall not apply within the Island of South Uist to the Gray Lag Goose.

The taking or killing of any of the following Wild Birds is hereby prohibited throughout the whole year, viz. :—Buzzard, Chough, Dotterel, Eagle (Golden), Eagle (Sea), Goldfinch, Great-crested Grebe, Kestrel, Kingfisher, Kite, Osprey, Owl (Barn), Owl (Long-eared), Owl (Short-eared), Owl (Tawny), Peregrine Falcon, Titmouse (Crested).

The taking or killing of any of the following Wild Birds is hereby prohibited between the First day of March and the First day of September in each year, viz. :—American Quail, Auk, Avocet, Bee-eater, Bittern, Bonxie, Colin, Coulterneb, Cuckoo, Diver, Dunbird, Dunlin, Eider Duck, Fern Owl, Fulmer, Gannet, Goatsucker, Godwit, Grebe, Greenshank, Guillemot, Hoopoe, Kittiewake, Lark, Loon, Marrot, Merganser, Murre, Nighthawk, Nightjar, Nightingale, Oriole, Ox Bird, Oyster-catcher, Petrel, Phalarope, Ploverspage, Puffin, Purre, Razorbill, Redshank, Reeve or Ruff, Roller, Sanderling, Sandpiper, Scout, Sealark, Sea-mew, Sea-parrot, Sea-swallow, Shearwater, Sheldrake, Skua, Smew, Solan Goose,

Spoonbill, Stint, Stonecatch, Tarrock, Tern, Thick-knee, Tystey, Willock, Woodpecker.

The taking or destroying the eggs of the following Wild Birds is hereby prohibited, viz. :— Bullfinch, Buzzard, Chough, Crossbill, Diver (Black-throated), Diver (Red-throated), Dotterel, Eagle (Golden), Eagle (Sea), Eider Duck, Goldfinch, Gray Lag Goose, Great-crested Grebe, Greenshank, Hen Harrier, Jay, Kestrel, Kingfisher, Kite, Mallard, Nightjar, Osprey, Owl (Barn), Owl (Long-eared), Owl (Short-eared), Owl (Tawny), Peregrine Falcon, Phalarope (Red-necked), Pintail Duck, Pochard, Quail, Scoter, Shoveller, Skua (Great), Skua (Richardson's), Skylark, Snipe, Teal, Tern (Common), Tern (Little), Tern (Sandwich), Titmouse (Crested), Tufted Duck, Whimbrel, Wigeon, Woodcock.

The taking or destroying the eggs of the Lapwing is hereby prohibited after the Fifteenth day of April in each year.

Many and various—large and small—are the animals waging war on our gallant little grouse, himself so peaceable and unoffending. In the category of vermin evilly disposed to all the finer sporting birds, while useless themselves either in a sporting or edible sense, are reckoned among ground animals the badger, otter,

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fox, polecat, wild cat, stoat, weasel, and even the squirrel, hedgehog, and rat ; and of winged species eagles of all surviving varieties, falcons, hawks, ravens, rooks, carrion or hooded crows, and even magpies and owls.

Space would fail long before the life-history of these members of the army of "vermin," and their individual propensities, could be described. But is not everything known or imagined about them already minutely recorded in many pages of many authors, such as Colquhoun, St. John, Tom Speedy, and others ? Of Mr. Speedy it may be remarked that no more enthusiastic and accurate observer of the fauna of the British Islands could be wished. Natural history is his second nature. He is saturated with veritable information, always ready to be produced, always interestingly told, and often of first-hand originality. One may not always be able to accept Mr. Speedy's views on particular points, but he is invariably a fair and interesting pro-

tagonist. His observations have often the quality of singular directness, and never fail in definiteness. Sometimes they bring him sharply into conflict with other observers, to the amusement as well as instruction of onlookers, as when he falls foul of Sir Herbert Maxwell's defence of the tawny owl.

Suffice it here further to say that it is the *business* of the eident gamekeeper to maintain for the salvation of the grouse under his charge unremitting hostility to all beasts and birds of predatory habits. No one, presumably, not even the sportsman or keeper, is so altogether void of admiration for many of the beautiful and agile creatures comprehensively classed as "Vermin" in relation to game, as to advocate their total extinction. That, it is feared, has already been accomplished as respects several of the species above named. But a reasonably protective policy towards the golden eagle, osprey, and several others has for some time generally prevailed; and it is to be

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desired that in the future, while subjecting animals of prey to compression, as it were, it will never be permitted to crush them altogether out of existence.

POACHING

Wherever game abounds there will the poacher be. Poachers, it is true, are found in greater numbers and more incorrigible, expert, and reckless in their nefarious practices on English and Irish moors, and those of the south of Scotland, where dense masses of industrial populations are centred, than in the sparsely peopled Highlands of Scotland. Poachers differ widely in degree of blameworthiness. He who surreptitiously, but rarely, succumbs to what may be called the poacher's instinct, but generally leads an honest industrial life, cannot be graded with a larger class who, though ostensibly and habitually in regular employment, more or less frequently give way in considerable numbers to the pleasures and profits which, appar-

ently, they derive from raiding neighbouring game preserves. With these classes of the poaching fraternity the keeper is generally well able to cope. But there is also the professional inveterate poacher, invariably of loose character and dangerous habits. His offence is deliberate. He poaches to gratify his depravities, shuns honest labour, and is a drinker and gambler. He is an expert in every art and device of plying his nefarious practices. He is of a class who work in gangs often with sweeping effect. Nor are they, when disturbed, unprepared to offer violent resistance to escape detection. Provided with firearms, dogs, nets, and all the implements of capture, both of ground and winged game, men of these habits are an unmitigated curse both to themselves and others. When convicted of offences accompanied with violence or bloodshed no leniency should be extended to them.

The difficulties besetting gamekeepers in the protection of their charges are not lessened but increased by the laws affect-

ing game and trespass in pursuit thereof. Numerous Acts of Parliament present, through the versatility and ingenuity of unlicensed takers of game, many narrow and undetermined points of law. There is a law for trespass in pursuit of game in the daytime, which is defined to commence one hour before sunrise and to conclude one hour after sunset ; and there is a law applicable to night poaching during the remainder of the twenty-four hours. These Acts, moreover, differ somewhat in the three kingdoms, with varying penalties for offences, night offences being more severely punished than those committed in the daytime.

Game laws have existed in this country from the reign of William the Conqueror (1066), and, as we have seen, there were many such laws applicable to forest, chase, and warren in mediæval times. It will for our purpose be sufficient to refer to statutes made within living memory and now in force. There are, as we have said, the Day Trespass Acts and

the Night Poaching Acts, applicable to and varying somewhat in their application to England, Scotland, and Ireland. Acts prohibiting the use or laying down of poisonous substances for the destruction of game and other protected birds and their eggs. The Poaching Prevention Act, 1862. The Ground Game Act, 1880. Acts relating to the times and seasons for killing game and the selling thereof. Acts relating to muir burning. And various other measures, all of which are fenced with penalties of fine or imprisonment, and bristle with phrases of doubtful interpretation.

While the number and intricacy of these statutes do sometimes exercise the wit and ingenuity of even the legally trained mind, not a little light has been thrown on them by successive decisions of the Courts ; and the experienced and tactful gamekeeper may now, perhaps, steer his way in ordinary cases through the shoals and dangers of poaching law with comparative confidence. But it is

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still, and will always be, necessary for him to be cautious, and while exercising constant vigilance in defence of his charge, to act with prudence and, whenever possible, without force or violence. The Game Acts provide sufficient powers of compelling offenders to divulge means of their identification where their identity is not known.

On every moor a sufficient and steady supply of pure water is very necessary ; and this cannot always be had without special means of ensuring it. In the western parts of Scotland, indeed, grouse more often are affected by a prodigality of water than scarcity ; but in the central and eastern portions of the country the opposite condition often obtains in dry seasons. In such cases the gamekeeper must carefully conserve and husband his resources of water by the creation of rivulets from the main supplies and formation by damming of numerous tiny pools whereat grouse may satisfy their needs. This is a point of good manage-

ment which will well reward all the pains bestowed upon it. Minute and systematic attention is given to it on every leading moor liable on occasions to water failure, however seldom or temporary. To the system of sheep drains is sometimes attributed failure of water-supplies on sloping ground, but sheep draining is now not much practised, and scarcity of water more often occurs from perfectly natural causes. Where, however, the artificial surface trenches known as sheep drains are still in use, tender young grouse are liable to fall into them and be drowned. The keeper must in such circumstances provide at frequent intervals sloping ways in the sides of the drains whereby young unfledged birds may escape from this danger.

Not only must a steady and pure supply of water be available to grouse, but they ought always to have access to little banks of grit. Many proprietors of moors place so much importance on this as being an essential of proper trituration and digestion

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of the food of grouse, and as, it is believed by some, a factor in prevention of grouse disease, that in localities where sand or clean gritty substances are not naturally found, supplies of these are brought to the ground and laid out for the grouse.

It hardly requires to be stated that keepers must never let the decomposing bodies of sheep or other animals, or offensive matter of any kind, pollute the air in the neighbourhood of grouse. All such substances should at once, when found, be buried.

Considerable numbers of grouse are killed by coming into contact with the wires of telegraphs and ordinary fences in their flight, especially when fog prevails. Wherever this danger exists it should be minimised by attaching conspicuous marks, such as metal discs, to these wires. The postal and railway authorities are usually ready to permit this to be done. Bunches of heather or rushes are also often used, and these have the merit of cheapness and easy application.

A most important and in the present day much-canvassed question is, whether the ideal grouse moor should be that and nothing else, or whether equal success, or at least reasonably successful results in rearing and preserving grouse, are not had where the moor is occupied by sheep along with grouse? There are many convinced advocates of each of these views; but it would seem that those who hold to the no-sheep system are steadily growing in numbers and influence. Their view of the matter has perhaps been helped by the small return which pastoral farming now commands, and may also be buttressed by the rapid substitution of shooting by driving instead of over dogs. On the other hand, there are equally convinced supporters of the view that a moderate stock of sheep is not only of no detriment to sport, but is in some respects beneficial; for example, in the keeping down of bracken by the tread of sheep over this pestiferous and widely distributed plant, when it is at a tender

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stage of growth. The rapid invasion of the common bracken all over the country, and especially the destructive encroachments being made by it on the heather of hundreds of grouse moors, is attracting much attention at the present time. No effective or practicable method of arresting or eradicating this worthless and injurious plant has yet been discovered, and the problem is creating not a little alarm both among agriculturists and sportsmen. Further references to this will be made in the succeeding chapter on Heather.

The comparative merits of moors holding sheep and of those where there are no sheep can hardly be said to be yet decided. On the one hand, unrestricted control and perfect quietness, the advantage of which from the grouse point of view cannot be gainsaid, which are obtained by divesting the moor of sheep or other agricultural stock, largely conduce not only to fruitful bags, but to the comfort of shooting. It can hardly be disputed that recent experience establishes this, complete control of

the heather, with judicious management of it, guarantees a constant and suitable supply of the staple article of grouse food. On the other hand, it is alleged that moderate cropping of heather by sheep is an advantage, and no detriment to grouse.

This question, it must not be forgotten, has its economic side. Even were lessees of grouse shootings quite prepared to acquire exclusive possession of their ground by adding to the ordinary shooting rent its pastoral rent, it is more than doubtful whether a vigorous protest against a general adoption of this practice would not be raised. A vastly preponderating majority, it may confidently be said, are, and will always be, more concerned with the raising of mutton for the multitude than of grouse for the few. Disputes, and claims arising from trespass of sheep upon cleared ground, would also, it is to be feared, not infrequently arise.

In a case heard last year before one of





the superior courts in England, an injunction was sought by the owner of a grouse moor divested of sheep against a neighbouring farmer to prevent his sheep trespassing on the moor and damaging the shooting. In the discussion and decision of this case the economic element involved was made prominent. The injunction was refused, and Mr. Justice Darling, in delivering the leading opinion, made the following remarks:—

If he as a judge were placed in the dilemma of having to decide whether he should stop sheep breeding, or the breeding of grouse for the pleasure of shooting, he should consider which was for the greater advantage of the community. Was it for their greater advantage that there should be an industrious pastoral population tending sheep, which would be valuable as food and for vesture, or that the people of England should have grouse shooting, and if they could shoot the grouse,—which few of them could,—even have grouse to eat? Without hesitation he should say it would not only be oppressive to the shepherd to say he must go so that the grouse were left, but that it would be distinctly bad for the community.

It might be easy to point to a want of

moderation and sense of proportion in these remarks, or to show that grouse shooting, as commonly practised, leads to a larger circulation of money, so far as employments are concerned, than sheep farming does. But the economic argument regarding interference with food production for the people, however insignificant this could be proved to be, will never be easily laid.

All that need be added is, that successful grouse shooting is not incompatible with moderate stocks of sheep on the same ground, especially where there exists, as ought always to be, kindly relations and respect between farmer and sportsman and their subordinates.

The present day sees a growing and almost competitive tendency towards the making of record bags of grouse. This seems to be a result, or at least to be coincident with a great extension of the system of group shooting or driving of grouse in recent years. On leading moors, both in England and Scotland where driv-

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ing is exclusively practised, phenomenal numbers of birds are recorded for a single day and for the full season. Probably the largest bag yet registered was made in 1904, at Broomhead, owned by Mr. Rimington Wilson, when eight guns killed the enormous number of $1371\frac{1}{2}$ brace of grouse in one day.

In Scotland the record bags have been obtained on the magnificent moors at Moy Hall, Inverness-shire, owned by The Mackintosh of Mackintosh, where the management has for many years been as nearly perfect as possible, and a valuable object lesson to all who desire to have the best in grouse shooting. Here in 1900 ten guns killed 870 brace of grouse in one day, and 6092 brace in the season. In 1905 the same number of guns brought down 914 brace in one day, and 7127 brace during the season. For several years past the grouse drives at Moy Hall have been assisted by King George, whose skill as a grouse shot is very great. On all these occasions great bags were

recorded. Last season eight guns had in one day 553 brace of grouse, on another day 463 brace, and on a third day 650 brace. Other moors in Scotland, though they may not rival those of Moy Hall in productiveness, yield in all ordinary seasons great numbers of grouse and other game. For example, in 1889 six guns obtained from Corrour in Inverness-shire, in the brief period from 12th August to 7th September, 4000 grouse and 445 head of other game. Nor was this a solitary performance on Corrour. This fine shooting is now the property of Sir John Stirling Maxwell, Bart., and during the twenty years or thereby of his ownership it has been one of the most carefully managed moors in Scotland, and year after year has yielded, in the absence of disease, enormous grouse results.

These great harvests of grouse are only obtained, it must be said, where driving of grouse to guns is exclusively or mainly practised. The merits of this system, as

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distinguished from the time-honoured mode of shooting over dogs, will be canvassed in a succeeding chapter ; and here all that may be further said about it is an expression of a regret, if not a lament, that the picturesque and more recreative older method seems doomed permanently to occupy an inferior place in grouse shooting. But one cannot help harbouring a hope that even among converts to the driving cult there may be not a few sensitive to reminiscences of boyish days, when their first lessons in the art of shooting were received from some accomplished elder member of the old school, father or grandfather it might be, over a brace of good setters. These may still find it pleasant to recall, and mayhap to regret, the passing of the picturesque surroundings and restful ways of the sport of the grouse in those bygone days. With thoughts pointing thus it will perhaps be forgiven us if we, with kind acknowledgment to the *Scotsman*, in which the following charming idyl of

“The 12th of August” originally and once again appeared, reproduce it here.

“The 12th of August.”

Day had broken about an hour ago—a grey, windless, early morning. There was nothing moving on the moors that the sharpest-eyed man could see, and nothing in the air but one speck of a hawk hanging like a spider from an invisible thread. Yet there was really a whole nation alive and stirring through the heather. The opening ling never moved, not so much as the least twig of it. The black pools among the peat-bogs might have been mirrors for the wild grasses; there was nothing but silence and loneliness from the sky-line of the hills to the peeps of far-away crofts, and all the time the little brown people were moving everywhere through the moorland. At last, on the side of a wide valley, one of them came boldly into view, towering full 18 inches above a tuft of heath, and quick as thought you might have seen the little hawk grow suddenly larger. He was a fine old cock grouse who aired himself on the tuft, his red-rimmed eyes looking keenly up and down the strath, his demeanour evidently a little anxious. He had the manner, in fact, of some one who expects something to happen. Presently another little brown head, with the brightest of eyes, rose from the heather, and a lady grouse came to his

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side, who, it was easy to see from her admiring and affectionate glances, must be his wife.

“No signs of them?” said she (that, at least, is the best English translation of her inquiry).

“Kuk, kuk!” replied her lord, with a slightly nervous assumption of contempt. “It’s far too early to expect ’em. I was merely looking at the weather. An unusually fine 12th, I venture to predict.”

Nevertheless, he scanned the sweep of moorland as though he expected the weather to come out of the ground.

“Cheep, cheep!” said a voice behind them (this remark is less easy to translate).

“Cheep, cheep!” said another; and in a minute seven well-conditioned young grouse were round the tuft, all evidently a little affected by the excitement. Their father surveyed them complacently.

“An uncommonly fine covey,” he said to himself; “not a bad cheeper among ’em.”

They crowded about him, all that you could see of them looking like long-necked bottles, with little inquisitive heads on the top. He regarded them more gravely, and then in an unusually serious voice began this address:—

“You are aware that you have come to the most momentous occasion in a grouse’s life?”

They became instantly solemn, and looked at him respectfully.

“To-day,” he went on, “you will experience your first 12th, a prerogative not enjoyed by any

of our inferior neighbours. We are game—‘fair game,’ I believe, is the technical expression—with a strong smell, a market value, and (I am led to understand) the most delicious flavour. For these privileges we have, of course, to incur a certain amount of what I may term responsibility. To the timid and apprehensive there might, no doubt, be something disagreeable in the prospect of taking so one-sided a share in a day’s amusement; but if you regard this occasion in the true grousely spirit your worthy mother and myself have always endeavoured to inculcate, you will find the day full of pleasurable excitement. Run your hardest, keep your heads well down, follow me; above all, rise the instant I do, and I think I can promise you a memorable 12th.”

At this stirring appeal the covey ruffled their feathers and looked about them very haughtily, like birds who had become conscious of their own worth (7s. a brace, as their mother proudly reminded them).

“And now,” said the Old Cock, catching sight of an inviting bunch of hill-berries, “let us fortify ourselves for this ordeal.”

And then you might have seen the whole family busily seeking for the little berries that cluster like bright, black swanshot upon their delicate, tiny-leaved plant. There were dense mats of them in some places, overgrown and half-hidden by the sheltering heather, and the covey feasted and then ran on, separating and finding

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each other again, all the way down the slope of the valley.

Meanwhile the grey sky cleared and the sun came out, and the cool hill air gradually warmed. With the sunshine came a million insects, and there was a low drowsy hum of life all over the moors. Higher and higher mounted the sun till all the clouds but the littlest and whitest were driven away, and a heat haze quivered above the distant slopes.

“Bang!”—and then “bang—bang! bang—bang!”—all very faint and far away. The covey stopped suddenly, the young ones lowered their heads, and the Old Cock raised his.

“They are coming!” said he. They all listened, but for some time there was not a sound but the sleepy hum of the heather folk. Then again, more faintly—“bang—bang—bang!”

“They are going away from us,” said the mother grouse.

“That’s a pity,” replied the Old Cock, with a great air of valiant indifference.

“Yes, isn’t it?” asserted the oldest cheeper. He had broken his egg fully a quarter of an hour before any of his brothers and sisters, and ever since had shown a very fine heir-presumptive spirit.

All through the quiet morning they heard the distant guns, till at last they grew quite used to them, and as they always sounded far away, the young cocks became almost aggressively cour-

ageous. About an hour after midday the sounds ceased altogether and there was a spell of sunshiny silence.

"They have gone away," said the heir-presumptive.

"My son," replied the Old Cock, "the hawks are not always hovering over us, but can a grouse ever say that they have gone away?"

They were now close to the burn which wound along the valley, and in single file they ran down the steep bank to drink. The rift which the burn had been cutting ever since the hills were made was so deep that even a man could see only the sky between its soft purple walls. For a grouse it was like standing in the hollow of a great ravine. The brawling of a tiny waterfall drowned all other sounds; it fell into a clear, brown pool where a few very juvenile trout darted for the banks, and then through shining rapids and two-foot deep pools the stream zigzagged past ferns and rushes and heath on its way to a far-off loch. All the time the high banks twisted beside it, so that looking up or down the covey could see nothing beyond a heathery bend. They drank with the deliberate pauses of people who are critical in the matter of a cellar, and then the youngest daughter having discovered the most irresistible bank of hill-berries, they lunched so long and luxuriously that an hour or more had passed before the Old Cock started up the bank again. Hardly had he put his head over the top

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when down it went again, and the covey at his tail flattened themselves on the instant. "They are on us!" said he.

The wide valley that they had last seen so empty and so peaceful was neither empty nor peaceful now. Not 150 yards away two dogs were scouring in opposite directions, a little behind them walked three men, each carrying something that glinted like a rod of glass in the sunshine, and behind these came two others bending beneath burdens. The dogs turned simultaneously, crossed, and then turned again. The Old Cock watched them with the keenness of a connoisseur.

"One looks like a pup," he remarked, "but I know that old white chap well. I remember sitting under his ugly nose for ten minutes one day, and then getting up 100 yards off. That's the real fun of the thing, my cheepers! May you live to enjoy it!"

"They will find us this tack for certain," said his spouse a little anxiously.

Even as she spoke, the other dog, a long-legged black-and-tan setter, stopped in the midst of his range so suddenly and stiffly that it looked as if he were turned into stone. "Not so bad for a pup!" said the Old Cock with professional enthusiasm. "Now, cheepers, the entertainment has begun! Follow me!"

The white dog was rigid too, and the three men with the shining guns were quickening their

steps and coming up to the black-and-tan. They could see not a single thing moving in the heather before them, but all the time the little brown people were scurrying through the maze of by-paths that no human eye can discern, bending so that they were flat from tail to crown, stopping sometimes under the shelter of a tuft where you might have walked over them and been none the wiser, and then following the Old Cock on again. Each time they paused he had some fresh directions to give them. Now it was—"Keep to your right; the man in the brown coat is safe enough, but whatever you do, steer clear of White-gaiters. You're as good as cooked if he shoots!" and then—"Remember to rise all together, all together, cheepers!" "They'd never let their poor old father have the six barrels all to himself!" he reflected a little apprehensively. "I must say that at my time of life I like to know there's a good thick covey behind me."

He led them artfully down into the valley of the burn. All the time the black-and-tan nose was drawing closer upon them, and they could hear the brushing of heavy boots through the heather.

"Now," said the Old Cock to himself, "White-gaiters is lowest. If we get up over the top, he can't shoot."

Up they doubled again. The young dog was over the scent, but the white nose behind held true. The shooters turned up too. The hind-

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most cheeper could hear the breathing of the dog most uncomfortably close, when with a "kuk-kuk!" the Old Cock was on the wing.

"Bang!" went one barrel, and he could hear the shot dust the heather behind him.

"Missed, by Jove!" he said to himself as he swung with the wind.

"Whirr!" the covey were up behind him.

"Bang!" again, and this time he heard the pellets whizz to one side.

"Missed again!" said he, "the duffer!"

"Bang!" and then "bang!" went the middle man's gun, but the man with white gaiters was still safely down by the burn.

Away flew the covey, skimming low over the heather, till they were beyond a ridge, and there was nothing but empty moorland around them. Like the opening of a fan the Old Cock's wings rose as he settled.

"And now, gentlemen," said he, "let us count our losses."

It was the first time they had been addressed as "gentlemen," and they knew that they had passed their test and were real grown-up grouse at last.

"We are reduced to seven," replied the heir-presumptive with a nonchalant air he thought appropriate to the occasion.

"The deuce we are!" exclaimed his father. "The man with the glasses bagged a brace, did he? Well, gentlemen, I flatter myself we gave

'em a bit of sport. I shouldn't be surprised if they think us worth another shot."

They had not long to wait before the white dog was over the ridge, and then in a minute the chase began again. This time they were a little exhausted by their exciting run and flight, and the Old Cock thought it more prudent to scatter a little and lie very close indeed.

"But mind you get up when I do," he implored them. "Think of your feelings if you saw your dear father killed before your very eyes!"

The dogs came up at a snail's pace, staring stiffly, hardly to be moved at all.

"The deuce take 'em," they heard a voice say. "This lot seems tryin' to waste time!"

"Kuk-kuk," replied the Old Cock, who could lie still no longer under such an aspersion.

"Whirr!" went the covey again, and this time six barrels rang out, and the Old Cock felt a stray pellet or two rattle on his feathers. "A close shave that!" said he. "I wonder how the others got on. I thought I heard a few drop."

This time he took a longer flight, for, as he said to himself, twice under fire was really all that could be expected of any covey, even on the 12th of August. He crossed into another valley, higher up among the hills, and very desolate and lonely looking; the cover was short, and he could see a long way over the moors.

"And now," he remarked, as he spread his

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wings and settled, "what have they bagged this time?"

But one glance was all the counting required—his faithful spouse and second or third son (there was always some ambiguity as to this gentleman's precise position on the family tree) alone settled beside him.

"Four down!" he exclaimed. "Very respectable shooting. White-gaiters got in his barrels this time evidently. Well, not a bad 12th, eh?"

"Excellent," assented his son proudly.

"I suppose we may call it over now," added the Old Cock a little regretfully. "They will hardly follow us up here."

All through the warm afternoon they stayed in this quiet little valley, but the whole time they kept drawing instinctively towards the hill-side they called home. Now and then they heard the guns, but as they considered their own adventures over they paid little attention to the sounds.

It was wearing towards evening when they found themselves close upon the watershed of the valleys. Perhaps it was the sunshine and the reaction after their spell of excitement that made them careless, but certainly the Old Cock was never more staggered in his life than when he suddenly found himself crouching once more under the palpitating white muzzle.

"Powder, wads, and bread sauce!" he exclaimed, "fairly caught this time!"

He took one glance and saw the three shooters about forty yards away.

"Still safe, I think," he said, and was off in an instant.

He had a glimpse of his wife and son rising too, and then "bang, bang, bang, bang!" went four barrels.

"Just in time," he said to himself. "They surely can't have reached any of us."

This time he flew on and on up the valley, and still up, right to the crest of the hills. The sun was low, it was quiet and far away here; the 12th at last was safely over.

"I think we can stop now," he remarked.

There was no answer, and taking silence for assent, he settled for the third time.

"Any damage this time?" he asked, but there was still no answer. He looked round, and, behold, he was alone.

It took a minute or two to quite realise what had happened. He looked down over miles of moorland and green fields beyond, and the shining waters of the lochs; he saw the five specks of men and the tiny white speck of a dog; they were going home, the day was finished.

"Four brace of fine birds out of my covey," he remarked complacently, "and I'm as sound as a heather bell. A most successful 12th!"



Fig. 1. Hippocampus (W. 100. 100. 100.)

CHAPTER IV

THE GROUSE IN RELATION TO HEATHER AND ITS TREATMENT

No heather, no grouse, seems a truism hardly necessary to be stated. But not every one knows, not every sportsman fully realises, that unless his moor is furnished with heather under the best conditions he cannot have sport of the best quality. So indispensable is good, sound, succulent heather to the welfare of grouse, and so important does the growth and management of heather count among the conditions necessary on an ideal grouse moor, that the subject is thought deserving here of more than a passing or general notice.

There are several varieties of wild heath, but the variety essential to the

maintenance of grouse is the common ling (*Calluna vulgaris*), which luxuriates on all moorish unreclaimed lands, but is perhaps most at home on peaty tracts overlying sand, and well open to sunshine.

In Scotland the heather flower is regarded with almost national affection, surrounded as it is with poetic sentiment and romantic story. Truly, nothing in nature is more lovely or more entrancing to the senses than a great stretch of heath in full bloom, giving forth its delightful fragrance in the pure mountain air. But we cannot dwell on this. Our task is the more prosaic one of describing the value of heather to the shooter of grouse, the best means of producing it in perfection, and of conserving it in health and vigour for the breeding and sustenance of grouse.

There are evidences nearly five centuries old of heather having had some economic value as an article of fuel. It was also, of course, from an immemorial age of some

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slight value for pastoral purposes. But the likelihood is that common heath had little pecuniary value at any period more ancient than about a century ago. At the present time it has attained its maximum value in connection both with pastoral farming and the attractions of the member of the feathered world which engages our attention.

The heather we are here dealing with is indigenous to vast moorland tracts in all parts of the United Kingdom. It requires no artificial or expensive systems of cultivation, either for pastoral or sporting purposes, beyond such measures of protection from injury or destruction to which it is open from natural elements as well as the ignorance or neglect of its caretakers.

Such parts of the immemorial tracts of moor and mountain in Scotland (which in the present day extend to over 9,000,000 acres) as were not occupied by the somewhat fabulous Caledonian Forests were doubtless clothed with heather. But it was

not till towards the close of the eighteenth century that such lands were put to any systematic or profitable use. Then, however, it was discovered that sheep farming might generally be conducted in the Highlands, as it had been for some time in the borderlands of England and Scotland. This being established, attention to heather as an important factor in the support of mountain sheep became a necessity, though then and for many years later this was conducted in a rude and haphazard way, involving many mistakes and needless waste. When, some sixty or eighty years later, grouse shooting became the vogue, further stimulus was given to the care and burning of heather, and the methods and conditions of doing so were greatly amended, so that a more regular rotation and fuller supply of sound heather should be secured.

This, however, was not arrived at without friction between those who practised the older and those who insisted upon adoption of the newer and better

ways of caring for heather. Not only the shepherds and the gamekeepers, representing respectively the grazing and the shooting tenants, but these tenants themselves (and of course the landlord always) were involved in ever-recurring disputes concerning the location, condition, and extent of the areas of heather which should be burned in each succeeding year. Of recent years, however, opposition of view in these matters has largely disappeared. The occupant of the grazing and the occupant of the shooting have perceived, what, from a common-sense view of the matter it is amazing should not have been always clearly perceptible, that their respective interests in the heather do not really conflict, but that for the feeding and healthy condition of grouse a full supply of young succulent heather is as essential as for successful pastoral farming, and that certain precautions and reservations as to shelter and cover for young grouse being allowed, their requirements as

respects heather are practically identical. In this matter, as in all others where difference of view is possible, everything depends on a reasonable treatment of it by the parties concerned, with now and then perhaps the exercise of a benevolent veto by the estate of anything unwise proposed by one side or the other. In such circumstances difficulties connected with heather burning now seldom occur, or are easily accommodated.

In Scotland, heather burning is legalised and regulated by the Act of Parliament 13 George III. cap. 54, which repealed certain older statutes about the same matter. The passing of this Act (1773) corresponds pretty nearly with the general introduction of modern sheep farming in Scotland, and probably was called for in connection therewith. It provides that muirburn, or heather burning, shall be legal only between 1st November and 11th April, but that this period may be extended to 25th April on an application to that effect by the proprietors of "high

and wet muir lands” being recorded in the books of the Sheriff Court. The penalties for infringement of this Statute are £2 for a first offence, £5 for a second offence, and £10 for a third and every subsequent offence, with alternatives in case of non-payment of these fines within ten days, of imprisonment for six weeks, two months, and three months, for successive offences. Prosecutions of this nature are now rare, though technical breaches of the Act are not uncommon, especially within the confines of deer forests, where, as generally few grouse and no sheep are found, there is sometimes a mistaken impression that heather burning need not be systematically done.

In England, the maliciously setting fire to any heath, etc., was made a felony under 7 & 8 George IV. cap. 30. This Act was repealed in 1861, and the ruling Act is now 24 & 25 Vict. cap. 97, which imposes very severe penalties for unlawful and malicious muirburn, though in practice these are now always greatly modified.

In the past divergent views were very common as to (1) by whom heather burning should be undertaken, whether by the proprietor or grazing tenant, or by them conjointly ; (2) at what age heather should be burnt ; (3) what extent in a single season should be fired ; (4) on what system burning should be done ; (5) whether it is preferable to burn heather early than late, within the ordinary open season, or also during the period of extension ; and (6) the effects on sheep and grouse respectively of well-regulated heather burning, and healthily produced heather. These points encompass all that need be said on the theory and practice of heather burning.

Before proceeding to notice these phases of our subject in more detail, it would have been interesting and perhaps suggestive to have quoted the views of early writers on those branches of rural economy which in the present day are so intimately connected with the management of heather, but it is curious to find

how little about the matter we can gather from these early authorities. Where any notice is taken of heather at all it is in the briefest and most casual fashion. Even the earlier writers on sport of the present generation do not occupy themselves at any length with a consideration of the growth and care of heather as an essential condition of good grouse shooting.

In the classical works of St. John and Colquhoun the subject receives practically no mention, while even in the pages of Mr. Tom Speedy's well-known and valuable work, *Sport in the Highlands and Lowlands of Scotland with Rod and Gun*, less consideration is given to this important matter than might have been expected. Mr. Speedy insists on the different methods and extent of heather burning to be followed in the interest of the farmer and the interest of the sportsman where sheep or grouse coexist on the same land, but in reference to this there has in recent years been a greatly

increased recognition of the fact that in reality little difference exists. What heather may be profitably burned for the grazing tenant will also be profitable for the shooting tenant when this is methodically, skilfully, and moderately carried out. In the authorities of yet later date, such as Lord Walsingham in the Badminton Library, Mr. Stuart Wortley in the Fur and Feather Series, and Mr. Mackie in *The Keepers' Book*, and The Mackintosh, whose successes in grouse shooting have been very great, more insistence on a judicious treatment of heather as an absolutely essential factor of successful grouse rearing is found. But it is when the records are examined of the most famous moors in our own day, where heather burning has been standardised and subjected to the established results of most careful and adequate experiments, where, in short, this matter is treated seriously in a scientific light, that the greatest successes of grouse shooting are seen. These striking suc-

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cesses are the more apparent and conclusive when they are collated with innumerable others where the older system of grouse management still holds sway.

Recognition, therefore, of the vital importance of having heather in high perfection for the welfare of grouse, and the application of this in practice, really goes no farther back than about forty years ago. Enlightenment seems to have come from personal experiments conducted in the field, prompted no doubt by private interest. About that period some of the greater owners of grouse possessions, both in England and Scotland, effected a marvellous change for the better in the productiveness, healthiness, and general betterment of their moors; and though by no means the only source, or perhaps even the most potent element of this improvement, undoubtedly the more rational, painstaking, and regularised system of growing heather and of heather burning which was then introduced is entitled to a large share of the success

which has attended the new régime. Other factors in the matter will be noticed in their proper place. These improvements, of quite modern date in the realm of the grouse, were introduced by a few gentlemen whose names are as household words in connection with grouse shooting, and often, too, in opposition to the rooted ignorance and invincible prejudice of even their own retainers. Stubbornness of will and immovability of hereditary view are seldom seen in greater force than in the old family gamekeeper, but happily an altogether different race of keepers is now occupying the field, and soon will do so completely. These men of education superior to the older race, of more receptive intelligence and openness to instruction, whose alertness and bodily activities are equally superior, are having a rapidly beneficial effect on all the matters committed to their charge.

Since the serious decline in value of mountain sheep grazings, which shows no signs of permanent recovery, the number

of grouse moors which carry no sheep and are devoted to sport alone has of late considerably increased. In such cases, of course, there is no question about who should undertake and control the disposition of the heather on the moor. The proprietor and shooting occupant are alone concerned with this, and their views are hardly ever in practice at variance. But moors on which grouse and sheep coexist are still largely in the majority, though, speaking generally, the sporting value now materially exceeds the grazing value. It is on these moors, where both grazing and sporting leases exist, that misunderstandings and trouble about heather burning sometimes still arise. These may spring from vagueness in the phraseology of the written agreements, or more probably from laxity in putting in force such conditions as have been made, leading the shepherd on the one hand, or the game-keeper on the other, to presume that he alone is invested with authority. When a dispute arises the sheep farmer naturally

sides with his shepherd, and the keeper is supported by his master. It is in such a situation when "feeling" has been engendered that foolish and destructive action by the one party or the other is sometimes taken. Control of heather burning should principally remain with the landlord; not that he may arbitrarily dictate to either of his tenants the precise periods, methods, and extents of burning, but that he should hold the balance evenly when contention arises. In practice, an arrangement such as the following has been generally found to work smoothly: The tenant desiring to have heather burnt notifies this to his landlord or his factor, and names a day when, weather permitting, he wishes this done, whereupon the proper estate official informs the tenant, if he be a farmer, that the estate keepers and other assistants, if required, will be on the ground at the appointed time to meet the shepherds, and proceed with the burning in terms of the conditions of tenancy. The same course is

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followed when notification is received from the shooting tenant.

To this day shepherds, gamekeepers, and others concerned are not always agreed as to the age when heather may no longer be advantageously preserved, but should be burnt. But a hard and fast rule is really here impossible. Age alone is frequently not the determining factor. It is obviously impolitic to spare certain extents of heather, though of only a few years' growth, which, from an abnormal action of frost or unusually prolonged drought, has, so to speak, been put "out of action," while, on the other hand, it is sometimes advantageous to retain an extent of considerably older heather which has preserved its vigour, and from its situation is useful for shelter. What would be a wise determination in one case or district might prove quite the reverse of this in another. The one overruling thought to be kept constantly in mind is that the object of heather burning is economic benefit to the subject

whether it be the farm or the shooting. Thus altitude, climate, soil, and exposure are all factors in the case, and have all an important influence on the growth of heather, as on all other forms of vegetation.

In some districts, and in the north and north-west of Scotland especially, regrowth of heather is extremely slow. It is therefore of double importance in such districts that the period of heather burning should be discreetly chosen and effectually performed, so as to excite regrowth with all attainable rapidity. In these districts of excessive rainfall and poverty of soil, if heather is permitted to live too long, or to attain unusual height and density before being burnt, regrowth not seldom fails altogether, and these areas are taken possession of by the unprofitable bracken, or other forms of vegetation nearly as valueless. Here it may be said that it has been observed that heather generally grows better, and retains its freshness and succulency longer



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on eastern than on western slopes. Heather is also believed to be favourably influenced by its proximity to the sea. Were general rules drawn up for guidance as to the age-limit for useful heather, they would, in the view of most practical men, include the following: Burn all decayed, decaying or injured and sapless heather. Burn the oldest and least valuable portions of heather, so that in a rotation of not less than ten years all the heather on the subject will have been overtaken. Burn, even more frequently, ground where a quicker reproduction may be reckoned on. When damp and deep ground may be burnt, do not hesitate to do so oftener than on dry slopes, for regrowth is more rapid on the former than on the latter ground. You can hardly have too much young fresh heather where you can reckon on steady successive supplies of it.

The extent of heather which should be burnt in any one season is also a point about which views are not always in accord. It is to some extent dependent

upon the average period occupied from the year of burning to mature regrowth on any particular moor. The yearly extent on any single moor or estate to which heather burning may be safely carried may greatly exceed that which may be properly practised on another. Here again soil, climate, and other elements enter into the problem. Where a rule or standard must be laid down in leases, a fair proportion frequently adopted is one-tenth every year of all aged, dead, or decaying heather, which of course is not commensurate with the same proportion of all heather and much less than all the ground of the farm or moor. Not infrequently it proves to be more than can be overtaken, owing to unsuitable weather, even when the burning season is extended from the 11th to 25th April; but it is usual on most estates when this occurs to allow in the succeeding year a further extent, equivalent to the shortcome of stipulated burning in the previous year.

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It is more important perhaps to determine the methods and conditions under which heath should be burnt than under whose control and to what extent this should be done. Here, at least, an approach to uniformity of practice is possible, for the same methods and appliances are, within limits, open to use on all moors. But although the only aim is or should be provision and preservation in regular rotation or succession of an abundant stock of healthy and vigorous nourishing heather, this in the past was, and sometimes even yet is, made matter of contention also. A common mistake of sporting tenants and their servants used to be that they burnt too little heather, while the opposite fault was more frequently attributed to farmers and their servants, both parties doing their work with little discrimination or intelligence. Setting forth on a day when they considered the moor dry enough to burn, they set fire to the first rank-looking patch of heather they met ;

then came an interval for rest and tobacco, while as often as not the fire romped over and ruined some nice patches of young succulent heather of only two or three years' growth. This, it must be admitted, is a picture of the past rather than the present, for nowadays both gamekeepers and shepherds are more alive to the fact that both grouse and sheep, and deer also, it may be added, should have heather of the same quality, and in a regularised supply.

Very great importance is now attached to the size, shape, and frequency of the areas burnt. In former times large fires were common, and thought necessary indeed for grazing purposes at least. It would be making a hazard to say that there are not some survivals of this view among pastoral farmers, at least, who count anything under sixty to a hundred acres in one place as insufficient and of little use. But there has been a great conversion even among them to the belief, confirmed by observation, and now all but

universal among those interested in sport, that the system of burning in narrow strips or in numerous small patches, in no case exceeding ten acres, and if only half that size so much the better, the total area burnt being, of course, not reduced, is the much better way. Some sportsmen have a decided preference to irregular patchy burning over straight-edged strips. As one writer puts it:—

Neither grouse nor sheep have any clear conception of mathematics, and a great waste of time and labour is caused by burning heather in even lines. Straight edges afford certainly poor shelter in wild weather to broods of young birds.

The following observations by a lifetime observer may also be quoted:—

The smaller and more numerous the patches of heather burnt the better. This applies to both sheep and forest ground. The burning of large patches should be put down with a firm hand, except in the case of ground that has been neglected when wholesale burning of old and useless heather is the shortest road to a better state of things; and as the young heather comes on, it should be broken up into smaller patches, and brought into a regular rotation. The object

of heather burning should be to provide the best possible supply of food for the different seasons, a thing that can never be done by firing a whole hill-side.

Infinite disaster has often been brought about by disregard of the commonest precautions and discrimination between heather that may well be set alight and that which should not. Shepherds have been marked as the chief offenders in this respect, but undoubtedly breaches of this kind are committed occasionally by game-keepers too, who, especially in deer forests, where the necessity of regular heather burning is not in many instances fully appreciated, do not exhibit the caution and activity in emergencies which might be expected from them.

But the era of monster runaway heath fires is, it is hoped, passing away, as well as another hitherto prolific source from fires created by sparks emitted by locomotive engines on railways passing through heathery grounds. Great damage, not only to heather but to plantations of

trees, frequently resulted, and still result, from this cause, which was obvious enough. But the railway companies were formerly practically immune from liability for their misdeeds, by pleading, first, that their engines were used under statutory powers; and second, that in such use every contrivance and reasonable precaution had been brought to bear against the emission of sparks and incandescent cinders. Further, the companies were not obliged to prove this, the onus of proving the contrary lying upon the injured party, which, from the nature of the case, he was almost invariably unable to do. The law having, however, been altered by an Act of Parliament, commonly called the "Sparks" Act, which came into operation on 1st January 1908, "to give compensation for damage caused by fires caused by sparks or cinders from railway engines," the railway companies can no longer claim immunity. The Act says, section 1, subsection 1, "that the engine as used under statutory powers shall not affect liability

in an action for such damage." Locomotive drivers may, therefore, now run their engines with this alteration of the law in view.

It is evident that in the burning of numerous small areas of heather, whether in strips or irregularly shaped patches of only a few acres in any one place, greater care must be exercised not only in selecting these areas from year to year, but in preventing the fires from extending beyond the bounds intended. These numerous isolated patches, which are undoubtedly the best methods of burning heather for the propagation and preservation of grouse, should be, as often as circumstances permit, ranged upon the most sheltered and sunny slopes, where young broods can feed and lie in comfort. It is, therefore, sometimes well that some of these dry slopes should be left unburned longer than the average period, to afford this shelter especially where the contiguous ground is soft and wet.

Whether heather should be burnt

earlier or later within the open season is not without importance. There are strong advocates of either view. In the Highlands of Scotland especially, where there is always a copious rainfall, and not infrequently coatings of snow till a later date, it is in some years, and these seem to recur more often now than formerly, impossible to get an adequate extent of heather burning done in the spring of the year. There is a strong inducement therefore, when a spell of dry weather and frost occurs in November or December, to get some burning done then on the higher ground at least. This is a course against which not much can be said, although as to autumn burning generally it has to be said that sproutings of young heather following thereon are liable to be nipped by spring frosts. Early *versus* late burning is a point which must be decided under the conditions of individual cases, but, on the whole, opinion leans to the period from about 10th March to 11th April as the best for muir burn when this is practicable.

As a precaution against fires escaping control it is advisable to burn against the wind. There is not only safety in this, but the fire does not travel too fast, and a more clean and thorough consumption of the old vegetation is obtained. Mention may be made of improved aids to burning in the present day, especially of the heather-burning lamp now in general use, which has superseded the "box of lucifers," tow, and other simple devices of the older days.

These observations should not be closed without some allusion to what has been described as the "curse of the bracken." The common bracken has for a number of years so asserted itself all over Scotland as to have become already a source of serious loss to many agriculturists and sportsmen, and a menace in the future to all who are in any way personally interested in land. Year after year its dominion is everywhere extending, and especially in the Highlands it is creeping over and throttling thousands of acres of valuable heather. The ubiquity

of this worthless plant, possessing some grace of form it must be admitted, is a very serious fact in the present day, and either for prevention or extirpation no one has yet put forward any effective remedy, though rewards to this end have been offered by the Highland and Agricultural Society, and other bodies interested in the matter. Further reference to this problem will be made elsewhere; and, it need only here be added that landowners in Scotland, especially Highland owners, and grazing and shooting tenants alike, as well as multitudes who are not among these classes, will not willingly let anything happen, suddenly or insidiously, to the injury or ruin of our beloved heather.

CHAPTER V

DISEASES OF GROUSE

OF all the ills which befall the grouse and misfortunes which overtake expectant sportsmen, none can compare with the mysterious scourge comprehensively but somewhat vaguely known as "the Grouse Disease." An exactly appropriate designation of this malady cannot be stated until its true character and undoubted origin have been scientifically demonstrated beyond cavil. There have not been wanting, indeed, causes assigned for the plague, proofs of its origin, methods for its prevention, or its evasion, or its cure; but truth to say, not one of these causes or cures has escaped damaging criticism. They have been shown to be either self-contradictory, or at variance

with the experiences of other observers. Over - preservation or over - stocking, parasitical attacks, atmospheric influences, insanitation, improper or excessive or insufficient food and water, destruction of vermin below the line of prudence, and several other reasons, have been put forward as the producing causes of this fell disease. But they have all as yet failed to bring conviction, and we are still waiting for an authoritative pronouncement.

Happily this matter was lifted out of the slough of empiricism and the cock-suredness of the limited local observations some six years ago, when the Board of Agriculture and Fisheries appointed an able and representative Committee to investigate the causes of, and if possible discover the remedies for the so-called "grouse disease," which, whatever it be, has on periodic but frequent occasions during the last sixty years or thereby caused so much mortality among grouse and ptarmigan. To Lord Lovat, who is

chairman of this Committee, the credit is mainly due for its appointment ; and when it is stated that the Committee includes, besides Lord Lovat, whose knowledge of the subject is pre-eminent, such well-known names as The Mackintosh, Mr. Rimington Wilson, Lord Henry Scott, Mr. Munro Ferguson of Novar, the Marquis of Tullibardine, and others, who are all intimately identified with grouse matters, it will be seen that at last there is a fair probability of the problem set to them receiving final solution. The labours of this capable Committee will result, it is hoped, in a complete presentment of the matter in all its phases, an enlightening and convincing account of the circumstances under which the disease is contracted, and above all, some definite and reliable guidance to precautionary and remedial measures.

In these pages reference has been made to not a few matters of moor management which are all highly advisable, and some quite indispensable to the

propagation and rearing of grouse. But preservation in high health of the grouse is of no less importance, and ought to be the universal aim. Till, however, the true nature of the diseases affecting grouse has by patient inquiry and scientific investigation been placed beyond all question, and preventative and curative measures have been tested and found effective, the sporting disappointments and heavy pecuniary losses of the past will too surely occur at not very lengthy intervals.

It is unfortunate for the present purpose that full advantage of the investigations of the Grouse Disease Inquiry cannot be obtained, seeing that the conclusions and recommendations of the Committee are not yet available, their final report not having yet been issued. But to a certain extent the lines of inquiry adopted by the Committee, and their methods of testing and sifting the statements and materials submitted to them, have been made known in an In-

terim Report. In this Interim Report the work of the Committee up to August 1908 is described, and an indication of the lines of inquiry which the Committee further intended to prosecute is given.

A scientific staff for such an inquiry as this Committee was charged with was of course an indispensable requirement, and the Committee were fortunate in obtaining the services of the following eminent pathologists and observers :—

- A. E. Shipley, F.R.S., Lecturer on Advanced Morphology of the Invertebrates to the University of Cambridge, as Expert on the subject of Parasites.
 - C. G. Seligmann, M.B., as Bacteriologist and Pathologist.
 - E. A. Wilson, M.B., as Field Observer and Pathologist.
 - G. C. Muirhead, B.Sc., as Field Observer.
 - J. C. Fryer, B.A., Cambridge,
 - A. Hill, Aberdeen,
 - P. Grimshaw, Edinburgh,
- } as Entomologists.

The Committee lost no time in setting about their work. They felt that if the true nature of the disease, its originating cause, its liability to spread, and other



conditions, were to be successfully studied, it would be necessary to organise comprehensive means of obtaining early intimation of outbreaks of disease. That it would, further, be necessary to adopt some method of sifting local evidence so as to eliminate what might prove to be mere unfounded alarm and retain only correct statements of facts. Accordingly, in addition to the scientific staff, centres of investigation were appointed, with local correspondents in touch with the same, and these local correspondents were in turn in touch with those persons, owners and occupiers of moors, and gamekeepers, whose avocations or tastes bring them into frequent direct relations with the subject of investigation. Hundreds of correspondents were enlisted in this work, and they are said to have done much valuable work. In the case of gamekeepers it has been stated, and there is no reason to doubt the statement, that the inquiry has greatly stimulated interest in the whole details of grouse management.

The Committee have also made a free use of printed information and instructions as to the development of the investigation, and the aids to it still required.

Before following the labours of the investigating Committee further, it will be proper to give a brief account of recorded outbreaks of grouse disease, especially the more extensive of and virulent of these; the measures, if any, taken to suppress these attacks of the disease and prevent their recurrence; and the state of opinion on this vexed subject at the date (1904) when the Committee began their work.

Among the older writers on this question—we can hardly say authorities, for admittedly their views and conclusions were of a fluid and tentative consistence—the first outbreak of grouse disease has been variously put as having occurred in 1838, 1843, and 1846. By Mr. Tom Speedy, in his work on *Sport in the Highlands and Lowlands of Scotland*, it is said: “The first time grouse disease attracted special attention was in 1838.

Prior to that date it was not unknown in Scotland, but it had not hitherto, in so far as we know, assumed all the alarming proportions of a malignant epidemic." While notices of grouse disease, prior to the date just mentioned, are not readily found, and perhaps do not exist, this of course does not conclusively settle the point whether it really prevailed earlier. Older writers certainly make no mention of it, but this may be attributed, not to its non-existence, but to the fact that prior to 1838 or thereabout grouse were rather a negligible matter, receiving not much notice of any kind. There is more probability to be drawn from all that is known, or may be inferred from other established facts, regarding grouse, that as long as grouse have been grouse, they, like all other animals, have been subject to certain diseases to which they are peculiarly liable.

Disease in grouse is popularly referred to as "*the* grouse disease," as if they were subject to only one ailment. This is no more the case with grouse than with any

other living animal. What is generally meant when disease in grouse is referred is to the peculiar, sudden, and frequently virulent epizootic which periodically sweeps through wide districts, carrying off immense numbers of birds, and leaving probably still larger numbers in a weakly and unhealthy condition. This disease is believed to be identical with the disease which was investigated by Dr. E. Klein about twenty years ago, and since then has sometimes been called "Klein's disease of the grouse." That grouse are not affected by this specific disease alone, but occasionally die in large numbers from other causes, has been proved, or rather has proved itself, since the investigating Committee set to work in 1904. Since that year there has been no notable outbreak of Klein's disease; but the Committee record that they have received "innumerable grouse said by the game-keepers and moor-owners to be affected with or killed by 'the' disease which further investigation has shown to have

been done to death by worms. 'The symptoms of 'the' grouse disease are not readily apparent, especially to the unclinical eye." In seasons 1908 and 1909 mortality among grouse from some sudden and unexplained cause was particularly noticeable; and again this points to the existence of *various* kinds of disease and causes of mortality among grouse. Expert opinion now goes the length of differentiating these diseases in the chronic form and the acute form, the distinguishing characteristics of which will be afterwards noticed.

Prior to Klein's investigations the pathogeny and obscurities of grouse disease were inquired into and described by Dr. T. Spencer Cobbold, F.R.S., whose conclusions were embodied in *The Grouse Disease* published at *The Field* office in 1873. It seems likely that Dr. Cobbold's conclusion that the entozoic parasite *Strongylus pergracilis* is largely responsible for the grouse epidemic, is likely to hold the field, though the conclusions arrived at by the stronger tribunal now digesting its

report must not be anticipated. Among others who have followed similar inquiries into this subject and are entitled to mention are Dr. Farquharson, Dr. Andrew Wilson, lecturer on Zoology and Comparative Anatomy, Mr. Harvie-Brown, and Mr. Carnegie in his *Practical Game Preserving*; but, sooth to say, very divergent views of the origin and nature of grouse complaints are held by these writers and the multitude of others who have given forth their empirical opinions with characteristic confidence and ultimate confusion.

Of all the alleged causes of grouse disease which have been advanced, the most frequently stated is, perhaps, over-preservation or overstocking. In support of this theory attention is called to the fact that very fatal and extensive outbreaks of disease have sometimes followed hard on seasons of great plenty on moors. There is no denying that on occasions this has occurred, but it has not been clearly established that cause and effect were here

at work, that overcrowding in one year or a series of years has of itself directly resulted in sudden and decimating disaster. Probably, when disease does obtrude itself, it is felt most and is seen to most disadvantage on a well-stocked moor ; but this alone is not convincing, but rather a mere question in arithmetic. Again, it is no less the fact that moors which are not fully stocked, certainly not overcrowded with birds, enjoy no immunity from the disease. The same observation applies to moors widely separated from infected overstocked moors.

In connection with overstocking of grouse reference is often made to what may be called under-stocking of vermin. The point is, that predatory animals which in former years abounded on the moors have been so killed down or reduced that the weaklings among grouse are now to a certain extent protected, instead of being captured and consumed by their natural foes. Thus unhealthy stock is propagated with a strong pre-

disposition to disease. But under modern conditions of shooting, especially the practice of grouse driving, which is making such rapid strides, it must now be a very uncommon case, indeed, where too many grouse remain at the conclusion of the season; and everywhere good management now insists on a rigid weeding out of not only all weak and unhealthy birds, but a ruthless reduction of old cocks. On all well-managed moors these are points which are strictly carried out. The theory that grouse disease is made or has become more frequent by the destruction or great reduction of ground and winged vermin is not borne out by the fact that deer forests, where vermin or rapacious animals of all sorts are generally and of set purpose left to follow without restraint their natural habits, have not been immune from grouse disease.

Another cause to which the grouse malady is frequently attributed is the unsuitability or insufficiency of their food,

and the accompaniments thereof on occasions. Rank, sapless heather, the effect either of neglect of timeous burning or of frost, and the absence of gritty matter which is so essential an admixture of grouse food, have, it must be admitted, not a little plausibility as a source of grouse disease. In all likelihood bad or inadequate sustenance is at least a strong predisposing cause of disease: but here again there are circumstances which seem to militate against acceptance without reserve of hunger or unsound food as the chief sources of the trouble. Frosted heather and very aged heather divested of nutritious qualities are, as a matter of fact, avoided by grouse instinctively. Further, disease has not been confined to the winter and spring months, but has frequently manifested itself in the summer and autumn when abundance of young succulent heather is available. Disease has also sometimes occurred with special virulence after winters of remarkable freedom from severe frost, and when no

heather suffered from this cause. While hesitating to fasten on unwholesome food or malnutrition as the only cause of the grouse trouble, it is, nevertheless, the case that after years when the growth and bloom of heather have been poor or not up to average disease in grouse has sharply occurred. It was noticed that the serious outbreaks of grouse malady which occurred in 1855-6, 1866-7, and 1872-3, all followed a stunted and unhealthy state of the heather. The lesson to be drawn from this is that in seasons when heather has not done well moors might with prudence be more heavily shot. Grouse are never averse to an occasional generous diet of oats or other grains, and it has been said that when they have with too much frequency or excess partaken of this, certainly not natural, but rather for them artificial sustenance, it may have been an excitory of disease. But there is really no reliable evidence of this.

Still another theory of the coming of

grouse disease may be noticed, though, like those already referred to, it has not been established. The belief that the grouse epidemic may, like many another in the animal and vegetable kingdoms, originate in atmospheric conditions has many supporters, whose numbers are extending. The characteristics, manifestations, and effects of grouse epidemic exhibit a striking parallelism to some better-known periodical outbreaks in the human and bovine races. This is doubtless receiving close attention at the hands of the investigating commission, from whom many illuminating facts and conclusions about this hitherto puzzling and malignant disease are shortly expected.

Such was the standpoint, a congeries of diverse and mutually destructive opinions, from which the Grouse Disease Inquiry set out on its work. The eyes of all who are interested in this investigation are now turned with eager expectancy to the full and final report which it is known will shortly be promulgated by

the Committee. Much close and original work, it is known, has been done by the Committee, not only in investigating the supposed actual or predisposing causes of grouse disease, some of which have here been mentioned, but in a searching examination of every other clue or probability which promised to be of use in the elucidation of the problem the Committee have for the last six years been endeavouring to solve. It is said that their efforts have been largely successful, and that the roots and scope of the two principal diseases to which grouse have in the past been so much subjected have been definitely ascertained, and that equally definite views have been formed of measures for the prevention or cure of the maladies.

The Interim Report of the Committee of Investigation, published by the Board of Agriculture in August 1908, is largely occupied with details of the methods adopted in opening out the inquiry. It refers also to observations in the field

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and scientific work in the laboratory. While it contains much interesting matter and fresh facts relating to the life-history and natural history of the red grouse, the final report, the appearance of which is so eagerly awaited, will not only present a digest of the collected observations and inquiries of the Committee over the more extended period, but will present the matured opinions and definite conclusions which have been arrived at after long, full, and patient study of the whole matter. There is great reason to believe that the results of these expert labours will throw much light on this hitherto obscure subject, and will prove very valuable. Here again it is regretted that, as these lines will appear before this important report, only an anticipatory and doubtless inadequate notice of it is at the present time possible.

We are not, however, left entirely to conjecture as to the coming report. While the Committee are, it is believed, satisfied that grouse suffer and die from

quite a number of diseases, they are agreed that by far the greater mortality arises from one or other of two main disorders, both of them parasitic, viz.: the *Strongylus* threadworm (*Trichostrongylus pergracilis*) discovered by Dr. Cobbold thirty-seven years ago, and the disease investigated by Dr. Klein, who described it as "an acute infectious pneumonia caused by an organism probably belonging to the 'colon' group, and is found chiefly in the lung of the infected bird." Klein's disease of the grouse known as *Coccidiosis* is the acute form of disease, while *Strongylus*, described by Dr. Cobbold, is the chronic form, which have been already referred to. Both of these grouse maladies have been subjected by the Committee to very searching scientific examination from every point of view. Besides these main troubles, which are the immediate factors of the illness and death of innumerable grouse, there are many subsidiary parasitical enemies of the bird, some of which living on the skin

probably fulfil the function of second host of the tapeworm found in the interior of the bird, though this has not yet been definitely ascertained. In the words of Dr. Shipley, "Grouse, like other animals, have a considerable fauna living both in and on them." He tells us that "The scientific members of the inquiry have recorded eight different species of insect or mite living either amongst the feathers or on the skin of the bird, or in other ways associated closely with the grouse, and no fewer than fifteen animal parasites living in the alimentary canal, the lungs, or other organs." Some of these are, however, he says, negligible, either existing in too small numbers to be deadly, or infesting only a small percentage of birds; while others have been found in about 95 per cent of the cases investigated.

It is more than probable that minutely technical or scientific descriptions of the appearance, functions, and effects of the multitudinous species of parasites by which the grouse is infested and often

done to death would not greatly interest the average reader, and it will not be attempted here. Let it suffice, in the near approach of the conclusion of the labours of the Committee of Inquiry, when the fullest information on this subject will, with the weight of their authority, be given to the public, to specify briefly the range of their investigations.

The Committee were appointed in 1904, and during the first two years they were mainly occupied with measures of organisation for the accomplishment of the task appointed to them. From what has been said of the opinions regarding grouse disorders prevalent prior to the nomination of this Committee, and the contradictory views and resulting confusion and uncertainty up to that time, it may be said, if exception is made of the investigations of Cobbold and Klein before referred to, that the Committee commenced their labours with a blank sheet, or at scratch, to use a common col-

loquialism. At all events the Committee seem wisely to have entered on their quest on that footing, so that we shall have from them for the first time a full, impartial, independent, unbiassed, reasoned, and exhaustive presentment of the whole matter as it has been disclosed to them after a long and searching inquiry. The Report will embrace a narrative of the Committee's work with statistics in illustration thereof, and will include departmental reports by the experts on the Commission. Among these will be found (1) Observation upon the normal life-history of the Red Grouse, and observations upon the various causes which tend to upset the normal course of this life-history, producing damage, disease, and death; (2) The Parasites of Grouse; (3) The Food of Grouse, and how far insect life enters into this; (4) The use of and varieties of grits found in the bodies of grouse and other game-birds; and (5) Conclusions derived from observations over a special experimental area.

When the work of the Committee is fully made known it will be seen how extensive, careful, penetrating, comprehensive, and laborious this has been. It was necessary to organise plans of their work, opportunities of making over a widely extended area the needed field observations, and means of procuring over an equally wide field specimens of grouse in health and disease, grouse food, and other productions, without which no useful progress could be made.

It has been truly said by Dr. A. E. Shipley, one of the experts on this inquiry, that in the study of grouse disease "our starting-point should be the normal, the healthy ; yet until lately no one has studied the *healthy* grouse, and indeed it is almost impossible to find a normal grouse, *i.e.* one free from parasites. A grouse cannot express to us its feelings ; the state of its tongue, the rate of its pulse, even its temperature tell us nothing, because we have no norm and no means of estimating the extent to which

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a diseased bird has departed from the standard of the healthy grouse. As regards the cause and symptoms of the diseases affecting grouse already noticed, it was of course known that in suffering birds there is a loss of activity, their flight is slow and limited in length, their call becomes feeble, their feathers lose lustre and become ruffled, the eye is dimmed. But these external symptoms may be associated with several diseases. Nearly all of them occur in the two diseases already noticed which are responsible for the greater number of deaths among grouse."

In the popular mind grouse disease is largely identified with tapeworm, three forms of which are found, sometimes in incredible numbers, in the interior of grouse. Their chief abode is in the caeca or blind-guts of the bird, of which there are two of great size in the grouse, equal together to the whole of the rest of the alimentary canal. These caeca or appendices perform very important functions in

the digestive economy of the grouse. When, therefore, anything occurs, nutritional or otherwise, to disorganise these functions the caeca are invaded by parasitical worms in incredible numbers, and the grouse dies from practically the same disease, appendicitis, which is so common in the human race, though in the latter case there is only one appendix, not two as in the grouse.

If it would be too much to say that all the maladies affecting grouse may be traced to malnutrition arising from unsound or insufficient food, it is at least certain that an intimate and fatal connection between disease and unsuitable food has been demonstrated. In the Interim Report it is stated, "If there is one fact that the Committee consider they have established absolutely it is the intimate connection between the food-supply and the grouse, that is to say, it is on the food of the grouse that the co-efficient of resistance against the ever-present hurtful entozoa chiefly depends. All evidence

tends to prove that liability to disease does not vary directly with the number of birds to the acre, but directly with the food-supply of the individual bird. Provided the grouse has sufficient food, means of digesting the same, and conditions generally which conduce to the upkeep of vitality, it is doubtful whether an increased stock, and therefore an increased liability to infestation by hurtful parasites, really affects the health of the bird."

The Committee proceed in their Interim Report to substantiate this most vital declaration by facts and arguments which will doubtless obtain an even larger measure of notice and stronger insistence in their concluding Report. They refer to the periodicity of grouse disease. They have examined records over a period of sixty years on many widely different estates, and have found the cycle to comprise "the good year, the very good year, the record year, the bad disease year, the recovery, the average, and the good average,"—a regular sequence of events,

culminating in an overstock and consequent shortage of food. It is here that the supreme value and importance of careful standardised management of the moor, especially of its heather (though hitherto scientifically managed moors have been in the minority), proves the rule. It has been sufficiently demonstrated upon these highly equipped and organised moors, that the best chance of averting grouse disease comes from scrupulous and unremitting care in providing ample, wholesome food, under the best hygienic conditions. Where this has been systematically attended to it is marvellous how seldom and how lightly in the last thirty years or thereby disease has been felt. Once more, for it cannot be too often insisted upon, let it be stated that the chief counts of successful grouse management are judicious heather burning, elimination of profitless and uninteresting vermin, judicious shooting, no over-severity either of dogging or driving. Good work in shooting, with knowledge of the stock ; no overshooting

when, either from wet or drought, the stock may have been depleted. And last, but not least, keen, careful, and watchful keeping. When these points are all properly attended to, then may not only expectation of plentiful sport and abundant bags be confidently counted on, but a hope may be entertained of practical immunity from the scourge of either *Strongylus*, *Coccidiosis*, or any other ill from which, with fell results, grouse have so long suffered.



SHOOTING THE GROUSE

BY

AYMER MAXWELL

CHAPTER VI

GENERAL AND OVER DOGS

“*Heir begynneth a ryght fruiteful treatyse.*” Such are the opening words of one of the earliest books issued from a printing press in this country, the first to deal, though only incidentally, with the “sportes” of England, seeing the light in London in the closing years of the fifteenth century.

Though it must be admitted that further perusal of the heavy periods of this ponderous tome sadly belie the fair initial promise, yet many, whose lot it is to drive the quill and swell the ever-growing mass of printed matter, must envy “Master Nicolas, preste,” the spirit of cheerful self-confidence in which he entered on his literary labours.

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In a far more chastened spirit must he approach his task who would write on such a subject as shooting the grouse; it is indeed a well-worn path in which he has to tread, following the footsteps of such exponents of the art as Mr. A. Stuart-Wortley, Sir Ralph Payne-Gallwey, Mr. J. G. Millais, masters alike of gun, pen, and pencil.

Yet there is not wholly wanting encouragement in the attempt: the stream of literature on the subject seems never-ending, and many of the more recently published, and apparently widely read works, dealing with this branch of sport, seem anything but satisfactory or conclusive. Some devote an entirely disproportionate amount of space to the time-honoured controversy of "*driving*" *versus* "*over dogs*," in which, though the writer usually lays great stress on the impartial spirit in which he enters on the fray, it very soon becomes obvious that he has only followed one method himself, of which he has become—shall we say a

determined champion, somewhat prone to lend easy credence to anything he may hear detrimental to his adversaries.

Many in number, too, are the mistakes and misstatements which appear in some of these works, entertaining enough to the initiated, but calculated seriously to mislead any who would seek information in their pages.

Take, for instance, such a standard work as the volume of the "Badminton Library" which deals with shooting. Bearing the date 1901 on the title-page, one might reasonably expect to find the contents well up to date; yet, turning to the chapter dealing with grouse-driving, you will find it stated that "eighty to a hundred yards is a fair distance to separate batteries" (*i.e.* butts, to use the more commonly accepted term). To this the editor adds a footnote:—

The present Duke of Roxburghe was shot in the face by the seventh Lord Chesterfield, and hit so hard that the blood ran down over his Grace's shirt, at a distance of 180 yards,

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carefully measured with a ball of string by myself. There should be some sort of screen between all batteries.

Now, it has been settled any time this last thirty years that butts should never be much more than sixty yards apart, and that gentlemen who fire down the line either do not come out grouse-driving at all, or are requested to abstain from taking any further part in the proceedings should they offend in this respect. Grouse butts are now put up on "offensive" and not "defensive" lines, that is to say, with a view to killing the birds, and not to being out of range of each other, and it seems a little dictatorial to lay down, just because the noble seventh earl appears to have been a somewhat careless shot, armed with a weapon of surprising range and penetration, that every one in a grouse drive must have a physical obstacle erected between him and his neighbour.

Other writers wander even farther astray: from *The Dead Shot*, by "Marksman," a work which attained great popu-

larity, and has run through many editions, we may quote the following extracts :—

Driving shelters, also sometimes called “grouse forts,” should be in line, each about 80 to 100 yards apart; as a general rule, they are much wider apart.

Grouse-driving commences on some moors about the middle or latter part of September, and continues to the close of the season. If the moor be favourably situated for the purpose, the sport may be, and frequently is, pursued with considerable success.

Grouse-driving is a sport to which belong the special features of safety in this—that by reason of the shooters being placed wider apart than in other modes of shooting, there is less danger of accidents from each other's guns; except in the case of two shooters being stationed in the same battery.

In another work, entitled *Grouse-Shooting and Deer-Stalking*, and published only two years ago, appear these somewhat surprising statements :—

If anything could make driving popular on Scotch grouse moors, it is bad weather.

Were as much time and money expended in the hand-rearing of grouse as on pheasants, we should more seldom hear of bad grouse years, in

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which sport is almost non-existent on the moors. It has been ascertained within recent years that grouse can be hand-reared even more easily than pheasants.

Or again, when the author is dealing with the difficulties of collecting beaters for driving on Highland moors, he instances the shooting at Moy Hall as an exception, and states that

. . . the Clan Mackintosh rallies to the flags of its chief on the heather for the grouse-driving campaign, just as it did in days gone by, for war with claymore and dirk, in a manner that might not be commanded even by the gold of an American millionaire.

Follows the usual sarcasm, in rather doubtful taste, about

. . . driving being fashionable with the swagger shots, who are able to go from lodge to lodge on their merits as marksmen. Their shooting costs them nothing, at any rate, and by driving they are enabled to do the largest amount of slaughter with the minimum amount of physical exertion.

On statements such as these, taken at random from the works mentioned, comment is needless; nor are they quoted in a critical or carping spirit, but because

they would seem to show, that though one may not aspire to any striking originality in handling so familiar a subject, yet the last word has not been said, and there is some need of a careful and modest presentment of the methods and manners at present practised in shooting the grouse.

The grouse has the initial distinction, over our other game-birds, of being the only one peculiar to these islands.

Except in the South and West of England, the grouse is found wherever its natural food, heather or crowberry, flourishes.

The best grouse moors in England, and indeed in the British Islands, are those of Yorkshire and Derbyshire. Grouse are plentiful, in varying degree, throughout the northern counties of England, Northumberland, Durham, Westmorland, Cumberland, and Lancashire. Good moors are found along the Pennine Range, and in Cheshire, Shropshire, and Staffordshire.



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In Wales the grouse have, under careful and scientific management, increased amazingly of recent years. The best of the Welsh moors are comprised within the limits of the five counties—Denbigh, Flint, Carnarvon, Montgomery, and West Merioneth.

Of Ireland, perhaps the less said the better, though the latest book on grouse-shooting strongly urges the would-be tenant of a shooting to fight shy of the high figures asked for moors in Scotland, and devote “his attention to the vast extent of land in the Emerald Isle that could be turned into game preserves at almost nominal rentals.” It is to be feared the experiment would not be repeated, for, although there are in Ireland stretches of heather and moorland, especially in the south and the west, which are potentially as good grouse ground as any in Scotland, they are practically useless, for poaching is almost universal, and the gamekeeper who tried to apply, in an Irish county,

the strict rules of preservation necessary to the well-being of a moor, would carry his life in his hand.

In Scotland the range of the grouse extends throughout the country, wherever the nature of the ground admits of its existence. The district which comprises the majority of the best moors lies in the centre of Scotland, and consists of the larger counties of Perth and Inverness and the smaller adjacent counties.

To the north the greater part of the counties of Ross and Sutherland is devoted to deer ground, on which grouse in any numbers are regarded as undesirable intruders. There are a few good moors, too, in these counties lying between the deer forests, and capable of yielding somewhere about a thousand brace in the season.

Argyle, again, consists mostly of grassy sheep ground and forests, with a few good moors in the Inveraray district, and on its southern extremity, the Mull of Kintyre.

In the Lowlands, Lanarkshire, Ayr-

shire, and Galloway all comprise stretches of good moorland within their borders, while the border counties of Dumfriesshire, Roxburgh, and Selkirk contain some of the best moors in Scotland, over 10,000 grouse in a season having been killed on the Duke of Buccleuch's moors at Langholm.

As a general rule grouse flourish most on the highest ground in the south, and prefer a lower altitude farther north.

Grouse-shooting began to come into fashion soon after the introduction of the railway. Before then little importance was attached to the sport, as the fact that in the year 1837 only eight grouse moors in Scotland were to let, and those at merely nominal rentals, shows most conclusively, if compared with the thousands of moors which now annually figure in the agent's lists.

A hundred years ago Scotland was still a little-known country to the average Englishman, and the wild scenery of mountain and moorland, so far from

arousing any admiration, still gave rise only to a strong feeling of distaste in the mind of many a Southron whose fate called him to sojourn among what to him seemed but bleak and desolate solitudes.

A change came as the century grew older, and the stress of modern civilisation drew an ever-increasing number from their country homes to pass their days at office, counter, and till.

Dwellers in cities, seeking relaxation after their labours, came to find new and hitherto unsuspected beauties in the rugged glens and corries of the north.

Improved facilities of communication made the once toilsome journey to the Highlands a matter lightly to be thought of, and the pursuit of the grouse rose steadily in popular favour, a rise each step of which was marked by a corresponding increase in the rentals realised by moors.

Nor is this popularity likely to prove ephemeral, for no sport is better adapted

to cater to the needs of those whose days of leisure are few. The shooting on a moor naturally falls within the compass of the normal autumn holiday of the man of business; and without having to reckon with any more prolonged or arduous journey than a night in a well-appointed sleeping-car, he may in some Highland lodge find the complete change and rest he seeks. Here nothing will serve to remind him of his workaday existence, and a month of plain living and hard, yet pleasant exercise in the healthiest of surroundings will send him back to his office restored alike in mind and body.

All forms of sport enjoyed by the leisured classes are now the object of much adverse criticism, but grouse-shooting may be defended on purely economic grounds, for it has come to be a real factor in the life of Scotland, and conducive, if not essential, to the welfare of her people. For while the few may benefit directly by the rents their for-

merly less productive acres now command, the many benefit indirectly, yet in no less degree, by the annual influx of wealthy folks whom fashion or inclination sends to pass their Augusts in Scotland.

In the days of muzzle-loaders the pointer and the setter were the inevitable accompaniment of a day's shooting. The close-cut stubbles and trimmed hedgerows of more modern times led to their disuse on the partridge manors of the south; while the adoption of driving, enforced by the increasing wildness of the grouse in the northern counties of England, still further limited the area in which they may still profitably be employed.

Now the time-honoured sport of shooting over dogs can only be enjoyed in the Highlands of Scotland, and even there the spread of driving has banished the older method of shooting from many moors. Yet there is little cause for fear that this charming form of shooting will fall entirely into disuse. In Caithness,

Sutherland, on the Western islands and adjacent mainland, grouse lie so close all the year round that driving is quite out of the question; while, by prolonging sport for a month on end, instead of compressing the shooting into a few days, this system will never want followers among those who come to pass away their autumn holiday.

It is not proposed to enter here into any detailed description of shooting over dogs, for it is a branch of sport wherein no further advance is humanly possible, and the methods of a hundred years ago differ in no whit from those of to-day.

The literature on the subject is exhaustive and complete; and the few notes which follow should suffice to indicate the methods of procedure. Shooting over dogs is essentially a sport for not more than two guns. On many moors it becomes murderous to have more than one shooter on a fine day, and on such moors the dogging beats ought to comprise a large stretch of

country if there are to be two guns out.

The dogs naturally play an important part in the proceedings, and it is most necessary that they should be well broken and fit for work. Setters range rather wider than pointers, and are consequently the best to use where birds are not plentiful. Setters are also better in rank heather and on rough ground, being less tender-footed than pointers. The setter is without doubt the hardier dog of the two, though the pointer is easier to breed and to break.

It is usual to start on the higher ground in the morning, working the birds down on to the lower feeding grounds, and looking to the evening for the best of the shooting.

In the earlier part of the season the custom is to start at the down-wind end of the beat, and work across the wind, driving the birds forward as far as possible, and turning into the wind whenever the boundary of the beat is reached.

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When, however, the wind is strong, this method would lead to birds turning back over the guns and being lost for the day, especially if working on the boundary. It may then be advisable to commence operations at the up-wind end of the allotted ground and work down wind, still moving zigzag.

Later in the season it is often necessary to work directly down wind, as birds will then lie when they would not otherwise, also, being obliged to rise into the wind, they offer a better mark for the gun if they get up wild ; this naturally calls for particularly good work on the part of the dogs to make it successful.

No sport demands such careful observation of the wind on the part of the shooter ; if he has not the direction of the wind continually in mind, he will find himself at a loss to know where the birds are when the dog points. An experienced hand may often secure an old cock by walking wide of a point. In this sport silence is indeed golden : conversation

between the guns, or a dog which requires vocal efforts on the part of the keeper to control it, is alike fatal to success.

It is well, alike for dogs and guns, to have a day or two on the hill before the actual shooting begins, for the walking that shooting over dogs entails is not lightly to be undertaken by any one who is quite out of condition. The morning should be taken easily, and the luncheon interval not unduly curtailed, for it is in the evening that men and dogs should be fresh, if the bag is to be well filled.

CHAPTER VII

ON GROUSE-DRIVING

THE practice of driving the grouse to the guns initiated not, to borrow from the scientist's vocabulary, in "spontaneous variation," or the man with the gun becoming too lazy to walk after the birds, but rather in "adaptation to environment," or, in other words, because for some unexplained reason the birds became too wild to allow the man with the gun to approach within range, and it became necessary either to give up shooting them altogether, or to devise some new method of bringing them to bag.

Cannon Hall, Barnsley, in the Sheffield district, can justly claim the honour of furnishing the first recorded instance of driving. Here, as early as the year

1805, George Fisher, keeper to Mr. Stanhope, drove "the low moor at Raynor stones" for the benefit of the squire's schoolboy sons. There were, naturally, no erections in the nature of butts, but the boys found shelter among some rocks.

The practice was continued in subsequent years, and found favour with Mr. Stanhope's guests, among whom was to be found the famous "Coke of Norfolk," by then Earl of Leicester, and still taking part in the sport, though eighty-three years of age, when it is recorded he was one of the guns at the "Boadhill" drive in August of 1836.

The first recognised shelter used by the guns was an old sand-hole for repairing the road. The uniform success of the gun who secured the sand-hole led to other holes being dug all over the moor. At first the bags were very small, and three brace for a gun was considered a big drive; but as the drives were rearranged and extended, the results showed a corresponding improvement, till in the

early 'forties as many as fifty brace were killed in a day. To such a performance the references in the papers of the day were not flattering:—"We are sorry to learn that the unsportsmanlike practice of driving grouse is still continued on Mr. Stanhope's moors; this mode of shooting cannot be too severely reprov'd," etc.

But Mr. Stanhope persisted in his reprehensible practices despite all adverse criticisms, and but a few years after his initial efforts had proved so effectual, we may trace the new method spreading all through the northern counties of England, first obtaining strong foothold on the Yorkshire moors, where owners and keepers took to it at once, and did much to improve and elaborate the system.

With the first ventures in systematic driving the name of George Sykes, Mr. Henry Savile's keeper at Rushworth Lodge, must always be honourably associated. One of the earliest masters of the craft, he made no secret of his knowledge, but was always willing to give to

others the benefit of his advice, laying out the drives on High Force, Longshaw, and other moors in the district, and giving instruction in his ways and methods to the surrounding keepers.

It soon became evident that the adoption of regular driving on a Yorkshire moor was attended by a surprising increase in the annual yield.

In the autumn of 1849, auspice George Sykes, 224 brace of grouse were killed in a day's driving on Rushworth. This was an unprecedented total for an English moor, bearing comparison with the best records of the Highlands, which were then regarded as the natural home of the grouse.

This "unearned increment" of driving has been the subject of much controversy. It is not easy, on many moors, to determine what proportion of the undoubted increase can be directly attributed to regular driving, or how much is rather due to better management under a larger staff of keepers, increased area

through the acquisition of some Naboth's vineyard, and, generally speaking, a more business-like way of going about things than in the more casual and desultory sport of other days.

In the Highlands it must be admitted that the material advantages of driving are not placed beyond doubt, and may be called in question with some justice. Though driving has steadily increased there of late years, and individual moors can show striking results, yet it is doubtful whether there has been any increase in the general stock of grouse, and there are probably fewer grouse on the Highland hills to-day than there were sixty years ago.

But whatever may be said of the Highlands (and an able writer¹ has clearly shown how one of the chief ends of driving is defeated in mountainous country, where the tops, on which the old birds mostly live, lie above and outside the driven area),

¹ Mr. A. Stuart-Wortley, *The Grouse*, "Fur and Feather Series."

the available returns, over a long series of years, of the low-lying moors of the Lowlands and England, point with no uncertain finger to the practice of regular driving as the direct cause to which the enormous increase, varying from 300 to as much as 800 per cent, is directly due.

A variety of reasons contribute to this result. In the first place, a moor which is driven is far less frequently disturbed than one which is shot over dogs. Probably it is only driven once, or at most twice in the year, instead of being liable to invasion any day of the week throughout the opening months of the shooting season. Of course birds are far more harried and disturbed in a day's driving than they would be in a day's shooting over dogs, and it might possibly be thought that after birds have been driven about all morning, to go on driving them about in the afternoon would be just as likely to scare them off the moor, as it would to leave them in peace after lunch, and shoot them again on another day.



GROUSE ON THE WING.

But every gamekeeper will bear me out that this is not the case. After a morning's driving the grouse get scattered and bewildered, and all that the driving and shooting of the afternoon can do is to make them still more scattered and bewildered, and can have no effect in permanently driving them off the ground. When the day is over the scattered birds will soon draw back to their own ground.

Where, on the other hand, birds are frequently disturbed, they soon learn to realise their danger, and take far longer flights when they are first flushed. They may thus discover a more peaceful spot in which to dwell, and be lost to the moor. Certainly game invariably does best on ground which can be kept quiet.

Another and more important cause of the increase on driving moors, is that the dangers of a weak stock being produced through too much in-breeding are materially lessened. Driving always tends to mix up birds belonging to

different parts of the ground, and to break up the various coveys; this leads to birds of one covey enlarging the circle of their acquaintance, and eventually seeking their mates outside the vicious limits of their own family.

When shooting grouse over dogs, it is by no means an uncommon occurrence for two guns to "mop up" the whole of a covey, when the old birds get killed first, and the young birds broken up in good holding cover. This must always be detrimental to the breeding prospects, for it makes one natural "cross" less to be hoped for. In any case, over dogs some coveys must always bear the brunt and suffer heavy loss, while others get away without losing a bird. We may reasonably suppose that in driving the losses are more evenly distributed; occasionally a covey coming between two good guns in an up-wind drive may get hardly dealt with, but if it were possible justly to apportionate the casualties at the end of a season, it would probably

be found that most coveys had paid their fair toll to man.

But driving helps a moor most by removing the old birds, which never fall to the gun by any other method. A pair of old grouse will require a far larger stretch of ground for nesting operations than younger birds. They actively resent any intrusion on the territory they have settled on for their own, and eventually rear a small brood where two pair of younger birds might have found range and food for their stronger and more numerous families. Still less desirable are the old cocks of bachelor habits. They rank with the worst of vermin, and the large numbers of them which fall to the gun by driving form the most sensible influence in the improvement of the moor.

Grouse-driving has always been the subject of much criticism; and even to-day many and bitter are the comments on this branch of sport, usually penned by writers who have had but little practical

experience of the subject. Sometimes these critics are betrayed into amusing contradictions ; as in two recent works on shooting, in which, while both unite in condemnation, the one writer summarises his objections under heads, and his "thirdly, and most objectionable of all," is that "many of the birds must go away wounded" ; the other, insisting on the poor standard of marksmanship required to kill driven game, states boldly that "if a driven grouse is hit at all, it is almost invariably killed dead."

The mistake of both alike lies in considering a driven grouse as a certain constant variety of shot ; whereas, in point of fact, driven grouse can be at once the easiest and the most difficult mark ever presented to the gun.

The dry bones of this worn old controversy should be allowed to rest in peace ; each method has its own peculiar merits, and the votaries of one should be slow to disparage the attractions of the other.

Where the moor is required to furnish sport to one or two guns for a month on end, which is generally the case on Scots moors let for the season, over dogs is the only practicable way of shooting.

If the occupier of a moor, on the other hand, wishes to entertain his friends, and is content to restrict the number of his own days' shooting, or if the laird wishes to turn his ground to the best account, and obtain the high rents which are cheerfully given for good driving moors, it becomes advisable to consider whether the old order should not yield to the new, and driving supersede the dogs. The problem must be carefully thought out, for to adopt the system of driving in a business-like way requires no small outlay of time, trouble, and money.

To make this worth while, the moor must be, to use a coined word, "drivable"; that is to say, there must be enough ground to manœuvre the birds on, there must be food-supply in the form of young heather in sufficient quantity to carry a good

stock, the ground must not be so steep or rugged as to prevent the line of beaters getting over it, and the main portion of the shooting must be given over entirely to driving, shooting over dogs being confined to a few days on outsides.

On a moor where dogs are used over the centre of the ground early in the season, where the heather is scanty or coarse and cannot be improved, where the natural features obviously forbid the attempt, or where one flight will take the birds over the march, it is best to give up all idea of driving on a large scale. On such a moor driving may be pursued in a desultory way, and very good fun it is, when the season draws on and the birds pack and get wild, to go out a party of two or three guns with a scratch team of three or four beaters, and a keeper who knows the game. Short drives and plenty of them must be the order on days like these, and twenty brace of grouse will be a very satisfactory total at the end of a day, which, if things have

been well managed, will be a real pleasure to all concerned, and will incidentally have been of good service to the moor in removing some of its most undesirable inhabitants in the shape of old cocks, who would never have been brought to book by shooting over dogs. But where the natural advantages are wanting, driving must be confined to such unambitious efforts; it would be labour wasted to attempt anything on a more elaborate scale, and could only result in disappointment.

But where the moor suffers from none of the disadvantages I have enumerated, and there exists what I may call the raw material of grouse-driving, enough birds to work with and enough ground to work them on, it is only a question of sufficient care and attention being given to ensure the production of the finished article—a good driving moor. But if such care and attention are not bestowed, and lavishly, the results will be sadly disappointing.

Good management will develop the latent possibilities of a moor to a surprising extent; but the converse holds good too, and where such management is wanting, it is equally surprising what a bad day it is possible to have on really first-class ground.

To any one who cares for seeing things well done, nothing can be more heart-breaking than to take part in a day's driving on a moor which has been allowed to take care of itself, where any efforts that have been made to improve it have been wanting in method or system, and have been little better than useless.

Here no one has looked after the shooting, the keeper has been left to plan out the drives unaided by counsel or advice, and they are laid out with mathematical accuracy like squares on a chessboard, with little regard to the natural features of the ground, and still less to the natural flight of the birds.

It by no means follows that the keeper is a born fool, only the narrow limits of his

own experience prevent him from finding out for himself how things ought to be done. Had some interest been shown in his work by his masters, some counsel offered, some of the principles which govern the sport discussed and elucidated in the light of a wider experience, he would probably have been only too ready to learn once he was started in the right path. With his dormant faculties once roused, and his ignorance turned to knowledge, he would have found a new interest in his work, and become as keen as any one to bring the moor to a better state. But, left unaided to his own devices, his work has become a dull routine; his mind only moves in a narrow groove, and he has made a sad muddle of the whole business. Never having been in a butt himself when birds were coming, he has not the vaguest idea of the requirements butts should fulfil, and he has fixed their positions in the most improbable situations, where they probably form the most prominent objects in the landscape.

The beaters, who can almost always be induced to take quite a lively interest in their work, when they know what is expected of them, evince no signs of intelligence, but move in a listless and dejected fashion, with a marked tendency to hang about the butts at the end of each drive. Birds there may be, and very likely are, but they are of the variety known as "perverse," and never seem to come near the guns in any appreciable numbers.

The keeper who undertakes the duties of flanker on such a day is a perfect eyesore to the initiated. He is probably armed with a small pocket handkerchief or a totally inadequate flag, but relies chiefly on his undoubted lung power to guide the birds in the right direction. Having placed himself, in the first instance, in a hopeless position almost in line with the butts, he attempts to flank in a lot of birds when they are practically already past the guns. Finding, somewhat naturally, that no amount of shoo-hooing, even when supplemented by the

energetically waved pocket handkerchief, produces the desired result, he moves forward to a more commanding position, whence by a further exhibition of mistimed energy he succeeds in turning a big lot of birds, who were coming nicely to the guns on his flank, right across the front of the drive and out at the far side.

The drives get worse instead of better as the day goes on, till, by evening, the birds seem to have disappeared off the face of the earth altogether. The guns who know how things should be done alternate between periods of gloomy boredom, in butts where they have a shrewd notion that no birds will come, and from which they feel they couldn't shoot them even if they did, and moments of intense irritation, as some of the more glaring errors are forced on their attention.

They are conscious throughout the day of a feeling of good things being wasted, of taking part in a wrong and inartistic performance, and it will take some of their host's driest champagne,

not too much iced, and quite the brightest pair of eyes next them at dinner that evening, to dispel the gloom and restore them to their native good humour.

A day such as I have attempted to describe—an experience which must be familiar to many—must be written down as a failure, and an inexcusable failure.

For it is not to every one that the good things of this world are given, and surely the fortunate possessors of wide stretches of moorland, with sufficient means to keep the shooting in their own hands, should not grudge the pains necessary to turn their ground to good account. A little trouble, spread over a few years, would have been enough to make this day of forty brace, which no one enjoyed, into a day of nearer two hundred brace, which would have been a real pleasure to every one who bore their share in it, from the gun who killed his thirty birds at one drive from a cleverly placed butt, to the lad with the pony who felt a pardonable pride in having contributed to

the general success by putting in some useful work back flanking.

In laying out a moor for driving, the chief influences to be reckoned with are the general lie of the ground, the natural flight of the birds, the prevalent wind, and how far these primary considerations can be reconciled to the probably conflicting local conditions of each separate case.

Most moors of any size are divided up into beats, each beat being as it were the unit of driving, with ground enough for one or possibly two days' driving, and under the charge of a beat-keeper. If this man be worth his salt he will have made use of his opportunities, and from constant observation in all weathers must know far more than any one else could hope to about the numbers and habits of the birds on his ground. He should have a general idea of the flight of each covey under all the varying conditions of weather and wind, and how far their normal flight is affected by being flushed from a different direction. He must know where the mass

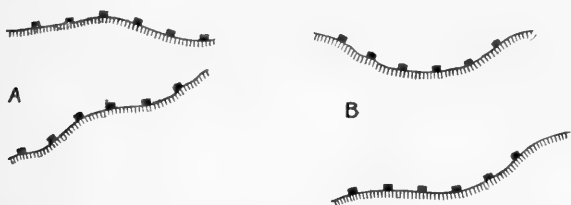
of the birds may reasonably be looked for in the morning, at midday, and in the evening. From all this carefully acquired information, which only the man on the spot can supply, the head keeper or his master, or, better still, both putting their heads together, can plan out the day.

The natural flight of the birds being known, and how far it may be altered by judicious driving and flanking, it will always be found that most of the lines of flight tend to converge in certain places. These are the right sites for lines of butts. The general scheme of the day must first be outlined, each drive being considered in relation to the following ones, and not as an isolated performance; the object of a drive being not only to bring the birds over the guns, but to push them on to ground which is to be driven later.

In choosing sites for lines of butts, the lie of the ground should always be an important consideration.

Figure *A* of the diagram shows, in section, the most desirable slope for lines

of butts, on the flat and on a hill place. Here the centre butt is the highest, and the ground falls away to the flanks, and experience has shown that this goes far to make a killing drive. In this instance the flight of grouse coming towards the butts can be well commanded by the



flankers, and “leakage” is reduced to a minimum.

Figure *B* shows the converse, with the centre of the butts in the dip and the flanks on the rise. This is a most undesirable state of affairs, and should always be avoided, for in this case the birds have a marked tendency to sidle away up the face of the hill and break out of the drive.

It is well worth while to “dodge” a drive about, till it admits of the butts standing on a “bulge” in the ground. In

short, convexity and not concavity should be looked for.

There must be some compromise, too, between the two desiderata—invisibility of the guns from the bird's point of view, and a reasonable visibility of the birds from the point of view of the man who has to shoot them.

Butts must never be placed on a skyline, and it is usual to have the line on a reverse slope, some 50 yards or so back from the crest ; this allows sufficient field of vision in front. This ideal can be kept in view, but cannot always be realised, for all other considerations must give way to the paramount necessity of all butts being in one straight line. Thus, in broken ground, while one butt has a clear field in front, it is often inevitable that the next should have a very short skyline. The moderate performer may then console himself with the fact that he will quite probably shoot well above his average, when he cannot see his birds coming, but has to snap at them on sight,



BURTS.

11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

with no time to poke or dwell on his aim.

While, in the longer drives off hill ground in Scotland, birds are brought clean off their own ground into country quite new to them, and it is all-important that the butts should be hidden from their view, on many of the English moors somewhat different conditions prevail. On a flat moor in Yorkshire, where there is not enough slope to admit of half-sunk and drained butts, it would be impossible to conceal the butts from the birds. Nor, in this case, is it essential; for if the butts be built up some time before the shooting, all the birds who come forward in the shorter drives of the low moors will know the butts well by sight, and take little notice of them if the guns are well concealed. All that is necessary, then, is to impress on the guns how important it is that they should go quietly to their butts and keep out of sight.

Having decided where the flight of the birds can best be intercepted, it is advis-

able for the keeper to try a few experimental drives with two or three men, placing himself where he can see how the birds would come to the guns. He may thus by actual observation verify his judgment, or he may see that the line should be moved a little; and it is surprising what a difference moving the butts 20 or 30 yards may make in the success of a drive.

The butts may then be constructed; their number depends on local circumstances; it may be necessary to make as many as nine or ten in one line, so as to be able to make the line conform to the wind, by leaving out those at the up-wind end, or the nature of the ground may admit of such concentration of the flight of the birds, that six or seven butts will meet all conditions, and this is, for many reasons, preferable.

The distance between butts cannot be laid down; in one famous drive at Moy Hall they are only 15 yards apart, but that is an exceptional instance, and the

average lies somewhere between 40 and 50 yards. But it may be regarded as a hard and fast rule that it can never be right for butts to be more than 60 yards apart. Even at that distance it takes a very good shot to deal satisfactorily with birds coming half-way between him and his neighbour, for, conforming to the angle of safety, he will never get a chance at such birds under about 40 yards.

With butts wider apart than the above limit no gun can be expected to do himself justice; half the birds that come to him will steer an even course between the butts, where they can only be killed by a fluke, being quite beyond the ordinary killing range, and where they are far more likely to go away "pricked."

The man whose ill luck it is to be sent to such a butt feels that any birds coming through the line should be shot at, though those passing between him and the next gun do seem an unconscionable long way off. The result is, that he wounds two or three birds at 60 or 70

yards, and is so upset by this unwonted bungling that he loses all the confidence in himself which is so essential to good shooting. He will then quite probably miss the simplest chances, and the drive, so far as he is concerned, becomes a failure.

It seems necessary to dwell somewhat strongly on this point, because keepers are apt to have an exalted idea of the range of a twelve-bore, and if left to themselves, will often put up lines of butts at monstrously wide intervals.

Only a few years ago the writer was shooting on a charming little moor in the Western Highlands. The company was good, the drives tolerably well arranged, and there was a nice show of birds, enough to raise hopes that we should run our two hundred brace very hard. In the event we just topped the hundred brace, and to do this probably wounded half as many again,—a sorry performance, though easily accounted for, when the distance between the butts was paced

and found to give an average of nearer 100 than 70 yards.

The owner of the moor was a lady, and had naturally left the management to the keeper; and though he was an intelligent fellow, and his general dispositions were distinctly good, the failure in this one detail was enough in itself to more than half-spoil the day.

Butts should always be well and solidly built, having some regard to the comfort of future occupants, who may have to pass long, cold hours in rain and wind with no other shelter against the elements. To give a guest six inches of water in his butt is scarcely more inhospitable than to give him damp sheets in his bed. Single-faced butts for this reason must be utterly condemned, though they are what a lazy keeper will put up if he is allowed to.

Butts should be rectangular or circular: the circular butt is very convenient to shoot from; but many object to them, because they give no indication of the

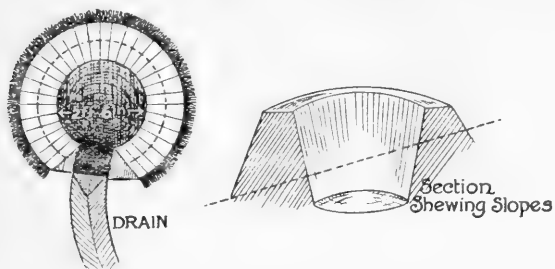
proper front of a drive, as rectangular butts certainly do if placed straight. It is purely a matter of individual taste which variety to adopt.

Half-sunk butts are always preferable to the built-up kind, wherever the slope of the ground admits of adequate drainage. They show very little from the bird's point of view, and are very nice to shoot from, because his position enables the gun to be on level terms with birds coming to him, never having to shoot down on birds, which always makes them more difficult.

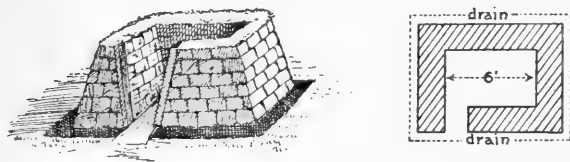
In the diagrams on the next page the half-sunk butt is shown as half-circular, and the built-up sort as rectangular ; this is merely to illustrate both kinds, and the forms are interchangeable at will. The circular butt may also be made in the form of a horseshoe if desired.

The diagram shows plan and section of a half-sunk circular butt. The dotted line indicates the ground-line in each case. The flooring is best roughly paved, where flat stores are available, or boarded. The

butt is dug out to a depth of slightly over two feet, and the parapet built up to the same height above ground-level, giving



the occupant a shelter of above $4\frac{1}{2}$ feet, which is the most convenient height to shoot over. The interior slopes should



be made as steep as possible, and should be lined with sods of growing heather. The drain should be made deep enough to carry away any water that collects inside the butt.

The second diagram shows the built-up butt, which has to be made use of when,

as is often the case, the slope of the ground is not enough to carry off the water from a half-sunk butt. The walls should be about 5 feet in height, kept as near the perpendicular as possible inside, and allowed a more liberal slope outside. The front face should be nearly 6 feet across, inside measurement, the entrance at the rear or sides, and the whole surrounded with a drain deep enough to keep the floor dry.

The outside of every butt should be made as inconspicuous as possible from the front, which is easily done by making it a gentle slope of growing sods. When there are sheep on the ground, it is well to enclose each butt with a wire fence, otherwise they may be found in a dilapidated condition when required for use.

Particular care should be taken to set the front face of a rectangular butt true to the line, for just as in golf a teeing ground askew seems to draw the drive in that direction, although the flag on the

green may clearly be seen, so in shooting a crooked face to a butt may lead any one to the far more serious matter of shooting down the line.

It makes for better shooting if the butts are placed in hollows and gullies, and not on the knolls; and if one butt is out of sight of the next, a good strong post should be put up in line between them, and visible from both. A strip, some 50 yards wide, should be kept closely burnt the whole length of the line, to facilitate picking up after the drive.

The old principle, when birds were driven backwards and forwards over the same place, was to make the same line of butts serve for both drives. This may be done with success on dead flat ground, but wherever the ground is undulating, and more especially on long hill faces, the usual conformation of moors in Scotland, there should nearly always be a second line of butts for the return drive. The grouse, coming from a different direction, change their flight to conform to the

altered influences of the wind and the lie of the ground, and will probably come higher up or lower down than before.

Further, it can only be very rarely that a line of butts is suitably placed from which to shoot both ways. It may only be necessary to move them 30 or 40 yards, but this should be insisted on despite the possible opposition of the keeper.

For driving, while it is expedient to have plenty of beaters, it is essential that they should know what is expected of them. The number of beaters varies from about a dozen to nearer fifty according to local conditions. In the sparsely populated districts of the Highlands men are not easily procured, and their number is limited by force of circumstance. In such cases neighbours may agree to drive alternate weeks to avoid competing for beaters. When men are available, it is best to make sure of having enough by allowing a liberal margin over what may seem sufficient.

In good seasons, when birds are plentiful, a double set of beaters saves much time, and adds considerably to the number of drives possible in the day.

Early in the season it is the practice on many first-class moors to drive the ground with a scanty, widely spread line of beaters, perhaps a dozen in all. The young birds are not flushed, but all the old birds come forward, and it is one of the most successful methods of dealing with these undesirables. Perhaps a month later the moor is driven again, this time with a full muster, and toll taken of young and old alike.

The beaters should all carry flags and know how to use them, and particularly how not to use them. The head keeper, or the keeper in charge of the drive, should have a different-coloured flag to any one else, for it is all important that he should be easily distinguishable, and able to signal readily to the flanks from his position in the centre of the line. There seems some confusion in nomenclature about

flankers. In Yorkshire it seems customary to call the advanced beaters flankers, and the men stationed on the flanks of the drive pointsmen. These latter are known in Scotland as flankers, and it is to them we would now refer. They should also be given distinguishing flags; white for the drivers, red or red and white for the head keeper, and yellow for the flankers, are the generally adopted colours. Birds on rising will always shape their flight to avoid the *first* suspicious object that has met their eye, and therefore the man who flushes the birds should be pushing them in the direction they are wanted to go. This is simplicity itself on flat ground, but in rough and hilly country, when the beaters are continually coming over sky-lines from the bird's point of view, it is one of the hardest things imaginable to get the right man to come first into view over a rise.

It is otherwise in Yorkshire, which is peculiarly favoured in this respect. There the tyke and the dalesman have an innate

love of the sport, know and appreciate every move in the game, and are capable not only of playing their part intelligently in an intricate combined manœuvre, but of acting on their own initiative and saving the situation when unforeseen contingencies arise. But, outside the home county of driving, the normal beater rarely thinks for himself, and it takes no little generalship on the part of the keeper to keep his men in hand, and make them realise that six foot of man carrying a flag is not a never-varying factor in the drive, but can suddenly attain tenfold importance when outlined against the sky.

The active duties of the flankers are occasional and momentary; for the most part of the time their rôle is invisibility; their appearances to be effective should be sudden and well timed. When birds are coming forward on a line which will take them outside the guns, they can, generally speaking, only be turned despite themselves. There is just one point in

their flight at which a startling apparition will make them swerve violently in the required direction, and send them over the guns without, probably, exactly knowing how they got there. The essence of success in flanking is unexpectedness ; the flanker should appear to the birds, not as a man with a flag, but as a sudden, unforeseen, and unapprehended danger. The good flanker is worth his weight in gold.

Back flanking, that is to say, turning the birds after they have passed the guns, does not generally receive the attention it deserves. One drive should feed another, and the success of later drives may be placed beyond doubt if some attention be bestowed on the flight of the birds after they have passed the butts, and men judiciously posted to guide them into the required direction.

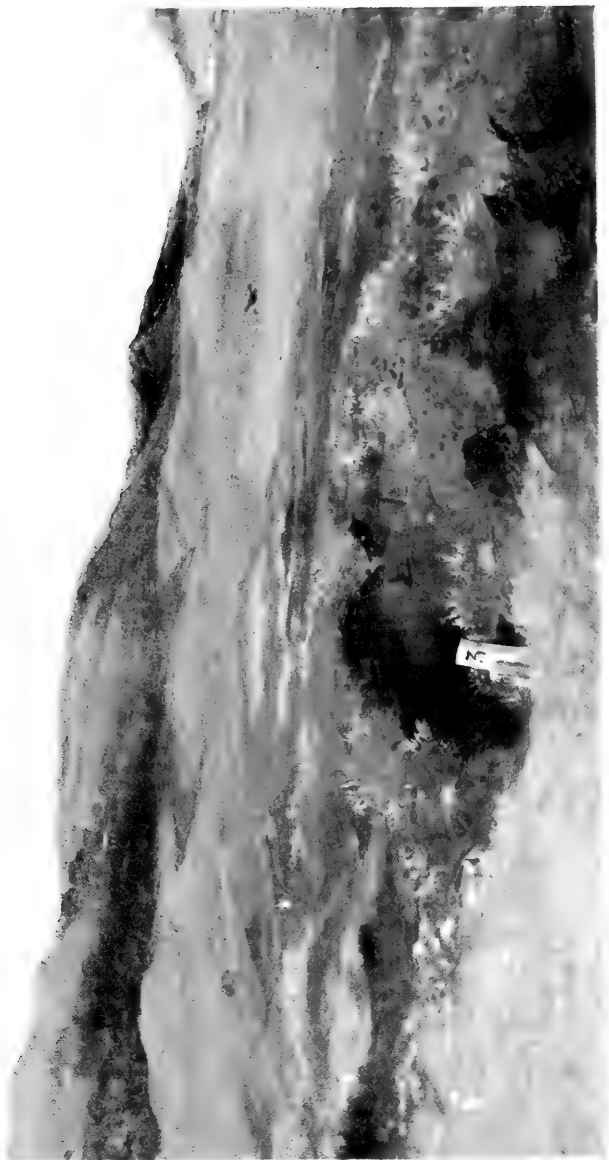
The time each drive takes should be reckoned with, and their number limited accordingly : it is a fatal mistake to try and cram too much into one day. The

beaters, on whose goodwill and staying powers the result so largely depends, should be treated considerately in this respect. It is too common to hear it said among the guns, who incidentally breakfasted heartily about four hours before: "Oh, we don't mind lunching late; let's have them back first." Of course they don't mind lunching late—why should they? But what of the unfortunate beaters, some of whom probably had to walk anything up to ten miles to get here before the shooting began, and have now gone without food for eight or nine hours? It is not thus that the best service is earned, and it is never a mistake rather to curtail the work of the morning, and look for better work from the men when they have fed—and well fed they should be, it may be added.

The length a drive should be cannot be fixed; the drives on a small but heavily stocked moor in Yorkshire may be less than a mile in length, whereas, in the Highlands, the beaters may take in

two or three miles of country in one drive. The long drives should be in the morning when the birds are being collected, the shorter drives after noon when the birds are getting broken up.

When driving birds up-wind it is often expedient, in the interest of the next drive, to ask the guns to let the leaders of any packs pass unshot. In such a case, if the first bird be shot at in front of the line the whole pack may turn back and swing away with the wind, and be lost for the day, whereas once the leaders are past the butts no amount of shooting will stop them going right. If the guns play their part in this respect, an up-wind drive is easier to manage than a drive when the birds have to be brought across the wind. When a drive is over, the guns should each be asked how many birds he has down, and a tally kept of the total to be gathered. This makes a check on the final score, and prevents birds being left to rot in the butts, by no means an unusual occurrence.



10. 2. 1. 1. 1. 1.



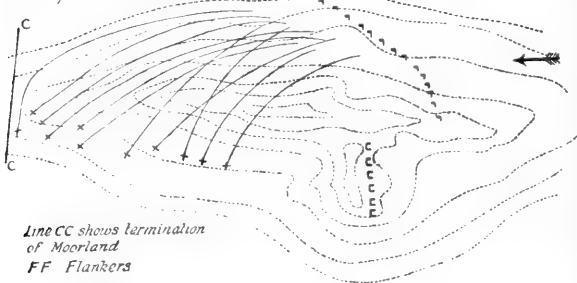
Besides this there should be a keeper whose sole duties are picking up. During the drive he should remain well concealed some two or three hundred yards behind the butts, where he can mark down wounded birds that carry on from the drive. This is scarcely necessary if there is to be a return drive afterwards, but when the ground behind the butts is not subsequently to be driven he may do good work, and the writer can remember a man so placed picking up seventeen birds out of a total of sixty killed in a drive where the birds had a strong wind behind them. Most of these birds had carried on out of sight of the butts, and would have been lost to the bag if there had been no one to mark where they fell. Besides this precaution, a man with a brace of spaniels, or a good working retriever, should always hunt round the butts after the guns have finished picking up.

Driving, when all these points have been considered, is a beautiful and

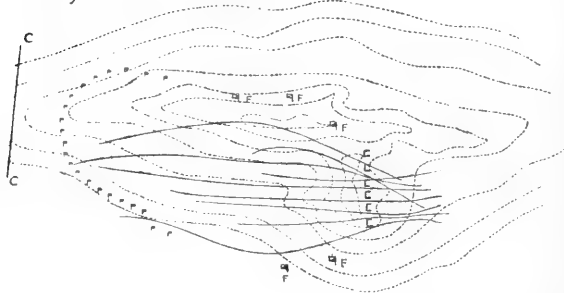
finished performance; and there is as much pleasure to be derived from watching the masterly handling of the birds as from the actual shooting.

When the birds are driven and not the

Valley drive 1st Movement.



Valley Drive 2nd movement.



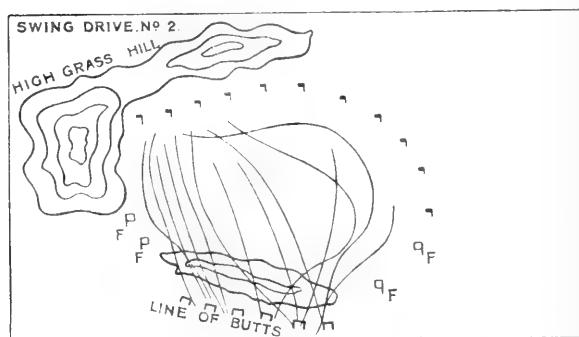
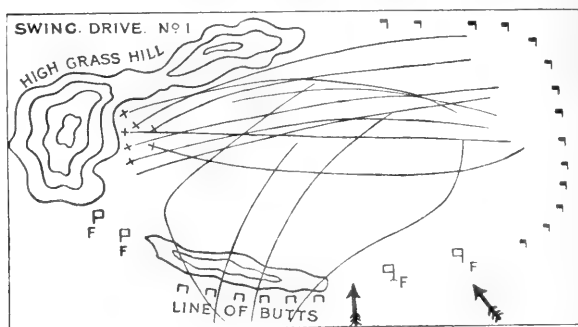
ground, the drivers rarely start opposite the butts, and advance directly towards them; they may sometimes even start

behind them, as in the drive shown in the diagram. This shows a long valley running up to the line C, C, which indicates the termination of the moor, the land beyond being under cultivation. The broad arrow indicates the direction of the previous drive which has helped to fill the valley. The drivers, starting to the right rear of the guns, push the birds along the opposite face.

The birds will not leave the moor, so they take across the head of the valley, settling about the points X, X. The drivers push their right round the edge of the moor, till they at length reach the formation shown in Fig. 2, from whence the second flight of the birds leads them directly to the butts.

The second diagram illustrates how some outstanding features in the centre of the moor may profitably be turned to account. This may be called the "swing" drive, and is a pretty effort in driving. It is simple enough on paper, and calls for little explanation, but it takes good

generalship to bring the beaters from their first position (Fig. 1), right round the



foot of the hill, till the final horseshoe formation of Fig. 2 is reached. The birds are driven straight for the hill, which they will not face, so either settle

in the valley below, or swing round to the guns. As the right of the drive edges round the foot of the hill the birds are flushed again, and pushed forward over the low ridge on to the butts concealed behind.

These are only two isolated instances, which might be multiplied indefinitely, every drive presenting a new set of problems to the organiser of the shoot.

CHAPTER VIII

MORE DRIVING

SOMETHING in the nature of an apology for the contents of this chapter is due to any masters of the art into whose hands this book may fall. It would be impertinent were the writer to think of teaching them anything of the sport they love and know so well; but there are always many others who lack their experience, and yet have the chance of bearing their part on the moors, and it is in the hope of starting such novices in the right path that the ensuing hints and suggestions are offered.

Let me then narrow my audience within the desired limits, and by the use of the personal pronoun confine the application of the following remarks to

those who would seek counsel and advice before entering on a sport of which they have little previous knowledge or experience.

In the whirl of our modern civilisation everything must be done in a hurry ; the more leisurely methods of other days yield to the influence of the times in which we live. In shooting, as in other matters, and you, to whom the opportunities of serving your apprenticeship to the gun in your schoolboy days were denied, may now learn how to handle the gun in proper style without ever setting your foot outside the area of the wood pavement and the taxi-cab. And very well taught you will be in one of many shooting schools which flourish round London, where every device is used to make the clay pigeon simulate the flight of the real bird, where you may shoot very tolerable imitation grouse out of a real heather butt, or walk up clay partridges in a real turnip field, with a skilled attendant always at

your elbow to coach you into good form.

There are several first-class schools of this kind—the London Sporting Park at Hendon probably being as good as any, and easily accessible. The manager at this institution can boast of having seen upwards of twelve million cartridges fired from sporting guns on his ground during the last few years. Lessons in the art of shooting from a tutor of such experience are undoubtedly of the greatest assistance to the beginner; the practised eye can follow the flight of the shot through the air, instantly detecting each error in aim, and taking measures to correct it—till eventually the tutor, having mastered all the idiosyncrasies and peculiarities of the individual he has to deal with, can fit you with a gun as well and as cleverly as a Bond street tailor will fit you with a suit of clothes.

This is certainly a very desirable state of affairs so far as it goes, that a man can now enter on the shooting field a

reliable and steady shot, with a thorough knowledge and mastery of his gun. But it is a pity that many should be content with so much efficiency, and never seek to widen their outlook by learning more of the habits and nature of the bird they are shooting.

Fifty years ago every man who bore the reputation of being a good shot was, as a matter of course, skilled in woodcraft and well versed in nature's lore, or he would never have known where to look for his birds or find anything to shoot. It is one of the most valid objections that can be urged against the modern methods of driving game, that it produces a type of shooter who shoots constantly and well throughout the season, is reckoned a good shot, and yet remains in complete ignorance of what should be, if not the mainspring, at least the most fascinating by-product of his sport, the closer study of wild animals in their natural surroundings.

Do not then be content, as so many

are, with attaining a mere proficiency with the gun: make it your object always to be learning something new about the habits of the birds you are shooting, and do not consider them as merely so many mechanical marks provided for you to exercise your marksmanship upon.

Some little knowledge of the work which has gone to provide your sport, some slight acquaintance with the varied forms of wild life which will reward the observant eye in a day's shooting, will add a rare and ever-growing interest to your sport, an interest which will outlive your shooting days and last you to your life's end, effectually preventing you from ever again being bored by an off-day in the country with nothing to kill, which is the unenviable condition of so many sportsmen of to-day.

The weapons of sport have improved to such an extent as to give rise to wonder if any further advance be still possible. It is but ninety years since

Colonel Thornton, using his famous flintlocks *Death and Destruction*, was obliged to note in his diary that "to-day they missed eight fair shots in succession, though I fitted them with five different flints." Now, the sportsman may buy his gun at almost any price from five pounds to a hundred, with fair certainty that eight misfires will scarcely be his lot in ten seasons. In choosing your guns, it is best to harden your heart at once, loose your purse strings, and pay the price asked by the best London makers. Admitted that the price is a stiff one, still you may rest assured that you will be getting a first-class article, which, treated with reasonable care, will last you a lifetime, and which can be relied upon to give good value for the money.

I know that many think it absurd to throw your money away on expensive guns, that you are paying for the name and not for the gun, and that you could get them every bit as good at half or one-third the price. Now I hold no brief for

the gunmakers, but in justice to an old-established and honourable trade, I think the following figures are worth consideration. They are taken from the books of one of our leading West End gunmakers, and show the actual wages paid by the firm for the making of a best-class gun :—

| | | | | | | |
|------------|---|---|---|-----|----|---|
| Barrels | . | . | . | £10 | 16 | 0 |
| Action | . | . | . | 24 | 16 | 0 |
| Stocking | . | . | . | 8 | 19 | 0 |
| Ejectors | . | . | . | 4 | 0 | 0 |
| Engraving | . | . | . | 4 | 14 | 0 |
| Locks | . | . | . | 6 | 0 | 0 |
| Regulation | . | . | . | 4 | 4 | 0 |

If you add some allowance for accessories, rent, and a reasonable profit for the gunmaker, it is clear that even at the top price most of the money you pay for a pair of guns goes into the guns, and not into the gunmaker's pockets.

Cheap guns are to be had, and they may serve their purpose after a fashion, but they can never give the uniform and satisfactory results over a long period of years, which may be confidently expected from the handiwork of any of our leading

gunmakers, whose names have become sufficient guarantee of excellence in all that comes from their workshops. Reliability is quite essential in a sport such as grouse-driving, for it subjects your guns to severer tests than most other forms of shooting.

In a good gun you benefit not only from the superior pattern and penetration it will give, but also its "quality." Wherein the "quality" of a good gun exactly lies is hard to define accurately; it is partly balance with an added something else, resulting in a general feeling of "handiness" which you will appreciate at all times, but most especially when you are feeling tired at the end of a long day.

And when you are the happy possessor of a good pair of guns, the like of which cannot be made in any other country but England, be sure and give them fair usage.

The action of a hammerless ejector gun is a far more delicate and complicated

piece of mechanism than was any part of the older central-fire, and good guns should always be cleaned by some one you can trust to deal gently with them.

If your own servant is not with you, it is well worth your while to clean your guns yourself, rather than leave them to the tender mercies of some rough-handed, inexpert underkeeper, who may work them irreparable mischief in a few minutes. Your gunmaker will give you clear and simple instructions how your guns should be kept and cleaned, and it only takes a few minutes' attention after a day's shooting to keep them in good order.

Nor should you stint yourself in the matter of cartridges : your own gunmaker is the only man who can know what charges of powder and shot will give the best pattern and penetration from your particular guns, and it will not be money wasted to pay him the extra shilling or so a hundred, and be quite sure that when you miss the fault lies solely with you, rather than effect a doubtful economy by

buying cheap, factory-loaded cartridges, in which you can never have implicit confidence.

Twelve-bores are admittedly the best guns for grouse-driving, if only because they are so generally used that, should you by chance be out of cartridges, you can always borrow from your neighbour at a pinch. Somewhere about seven pounds in weight, with 28 - 30 inch barrels, cylinder for choice, makes the most all-round satisfactory weapon.

As to clothes, nothing striking in the way of colour can be tolerated on a moor, and the more invisible a shade of Harris tweed or homespun you can choose, the better it will be. Your coat should hang free and easy, giving full play to the arms. It is well to be warmly clad for grouse-driving, and a heavy tweed should always be preferred to the more summery cloth your tailor will seek to supply you with. A butt on the bare hill-side of a Highland moor can be a passing cold abode on a stormy day, even though we

may be scarce half through the dog-days, and but yesterday you were sweltering in your London office in the thinnest of flannel suits.

There is still the question of dog or no dog to be decided. If you have time and patience to give to breaking him in, and can give him enough exercise to keep him in health, the companionship of a good dog certainly will add materially to your enjoyment. But a badly broken dog in a grouse butt is infinitely worse than no dog at all; he howls and whines whenever a shot is fired, disconcerts your aim at the moment of firing by jumping about, and finally escapes before the drive is over and careers over half the countryside, to your own mortification and the openly expressed disgust of your neighbours. But if your dog is under control and understands the game, he will lie at your feet like a rock through the drive, only betraying his deep interest in the proceedings by a gently wagging tail, till the beaters are in and his turn comes.



View of Burial Mound

A steady, close-hunting retriever or a spaniel makes the best dog for the work ; and it never should be necessary to tie your dog up during the drive ; it takes away his sense of responsibility, and makes him capable of any enormity when he is let loose.

Now let us suppose the day has come when you are to make your first essay at the driven grouse.

Once arrived on the ground, the places for the first drive are usually settled by drawing, the guns moving up two places between each drive, so that all may have equal chances during the day.

Having drawn your number and found out where your butt is, go quickly and quietly to your place. Let the other guns stay "coffee-housing" if they will, but you wish to make the most of your chances to-day ; you may very easily score a stray bird or two by being in your place betimes, and, in any case, you will give yourself plenty of time to make all your arrangements and be ready for action when the

birds do begin to come. First make your butt the right height; if you are a son of Anak, you will find loose turfs lying by the side of the butt, which you can pile on top of the existing structure, until you can get sufficient cover without stooping,—a most important consideration if you want to do yourself justice, while, if your stature be small, you may have to take a sod or two off the top to enable you to shoot freely at birds coming in front.

Remember, in adjusting your butt, to look at it from the bird's point of view; if the ground in front rises sharply on one side, that side of the butt must be correspondingly higher.

Now look to your foothold; it is essential that you should be able to turn round with ease; nothing is more fatal to your peace of mind, and consequently to your shooting, than to find yourself bogged to the ankles, when birds are coming thick, and you want to turn round in a hurry. Some minor draining opera-

tions may be necessary, and you will find that an armful of heather will improve a sticky flooring. Next, to dispose of your dog and your loader if you are using two guns.

Let your loader crouch close behind you, with your cartridge bag open on the seat close to his hand ; he will be well out of your way there, and you will be able to swing round quickly without danger.

Set your dog down in the corner of the butt ; and take the trouble to see he has a dry seat, the pains you are at to see to his comfort will not be labour wasted in the end, and the good sportsman is always attentive to the well-being of the humbler sharer of his pleasure.

Now slip a few cartridges into your right-hand pocket ; if you are only using one gun, it is far the best place to load from, and even if you are using two guns, a few cartridges ready to your hand may come in very useful, when you cannot get your second gun as quickly as you want it. Now you may load your gun, and lean

it carefully against the front of your butt, and we will allow you half a cigarette while you carefully take stock of your position.

First make sure that the front of your butt faces square with the line; a butt set askew to the line is apt to be prolific of accidents among the careless. Note carefully the position of the butts on either side of you, and fix accurately in your mind where the nearest flanker is, if you happen to be flank gun. This world is not all perfection, and in the lower walks of grouse-driving it is by no means uncommon to discover the flanker lying up in the heather forty or fifty yards to your right front, just where, had you not noticed him, you would naturally have taken a bird coming to you on that side, running the risk of destroying at once his eyesight, and, most undeservedly, your own reputation as a safe shot.

Now study minutely the ground in front of your butt. There is almost invariably a blind spot to every butt, where

a fold in the ground, a stretch of shimmering grass, or the sun shining on their bodies, will enable the grouse to steal on you unawares, and it is your business to find out where the difficult spot is, and give it particular attention throughout the drive.

Take note of the force and direction of the wind, remembering that it is the one important factor in the flight of the birds : you will soon learn to spot where the birds that are coming to you will first appear, how sometimes every bird that first comes in sight, straight in front of you, will cross the line two butts lower down, while your own birds first come in view far away on your other side.

You must settle for yourself, too, at what point you will take your first bird ; there will generally be a stone or tussock forty yards or so in front of your butt, which will be useful as a guide to you, and the same to your right and left, choosing points at something like an angle of 45° to the line of butts, and deciding on no

account to fire at any bird in front closer to the line than the marks you have given yourself.

I have seen it recommended to new hands at the game to put sticks in the sides of the butt to prevent them shooting at birds too close to the line: nothing could be more fatal. True, that so long as the shooter kept his feet and body immovably fixed in one position, he might rely on the stake bringing his gun up short should he show any tendency to follow round too close to the line. But let him but lean a few inches forward and he could, in a fancied security, fire straight into his neighbour's butt without touching the stake at all.

Now all these preliminaries may seem to you rather a bore, but there is nothing in this wide world worth doing well which can be done without a little trouble. Expend this amount of conscious effort on your first twenty days of grouse-driving, and you need then trouble no further, for it will have by then become a second

nature to your trained eye to mark, learn, and hand over to your brain to inwardly digest the salient features of each butt you are sent to occupy.

But your labours are not yet over when these preliminaries are finished. From now to the end of the drive you must incessantly scan your horizon from right to left and back again, remembering that to see birds coming to you in good time is half the battle, and that by far the greater proportion of misses one sees in a day's grouse-driving under normal conditions are due, not to bad shooting, but to being taken unawares. The sudden jerk you give when a bird has got within a few yards of you unseen betrays your presence, and evokes a corresponding "jink" to one side on the part of the bird, and what was going to have been a "moral certainty" had you been ready, becomes a difficult shot to any one, and an exceedingly probable miss to one in your flustered condition.

Let, Ready, aye Ready, then be your

watchword, and when the birds do come remember your business is to "beat them back."

Pages have been written on how best to shoot your birds, long technical descriptions of how much to allow under varying circumstances, but all, I fear, to little purpose. Only your own experience, and the hints you may gather from watching good shots in the field, can teach you how to kill birds cleanly and in good style. All the good you can gather from books on the subject may be comprised in a few hints.

Choose the bird you mean to kill quickly, and let nothing divert your attention from him while he is still alive. Keep your eye fixed on him, and as soon as he comes within the killing range you have allotted yourself, throw up your gun, with your left hand reaching well forward, and pull as soon as it gets to the shoulder. Avoid any dwelling on your aim or following birds round as you would avoid the devil, for thus are dangerous shots made.

The habits you contract in your early days will stick to you for life, and it is much better to start by missing birds in good style than to kill a few by poking, ugly shooting. You must select the spot at which your shot should intercept the bird, and trust to your gun to do the rest. If your gun fits you well, and you have learnt to handle it properly, it should come up exactly where you want it to, and you cannot hope to improve matters by trying to take a conscious aim once the gun is at the shoulder.

As long as there are any birds coming to you in front you must never turn round. You will find your natural tendency, after missing a bird in front or killing one out of a covey, is to turn round and try conclusions with them again when they have passed the line. There is no harm in this in a moderate drive, when birds are few and far between. But in a good drive, when birds are coming to you steadily in a long stream, you will find that to turn round will place you at a

serious disadvantage. Nothing is more disconcerting than, after dealing with the bird you turned round after, to find other birds sailing into view to your right and left, or worst of all, straight over your head. It is very hard then to do the right thing and turn straight to your front again, and you will probably try long and difficult shots at the birds passing away from you, while all the time there was a succession of the easiest of chances presenting themselves in front.

In front of your butt is the right place to kill your birds, and it is there that you must do the most of your scoring, if you are to have a respectable total at the end of the drive. Except in a down-wind drive, you must always try and take two birds in front, and to accomplish this successfully you must learn to be very quick in changing on to your second bird the instant the first is disposed of. The difficulty which besets the beginner is not so much the actual shooting, for the right bird taken in the right place is

generally a very simple shot, but in deciding which the right bird is and where he ought to be shot.

In watching a first-class performer at work in the butts, what impresses one most is not the number of brilliant "gallery" shots that he brings off, but how simple he makes the shooting seem. You feel that it would have been inexcusable to miss almost any of the birds he fired at, they all looked what are popularly know as "sitters." The secret of his success lies in his always seeing which bird will give the easiest chance, and never taking a difficult shot when he can help it.

When a lot of birds come towards his butt, he has chosen his two victims before they are well within range, looking as far as possible for two birds coming one behind the other, and more or less at the same angle; he keeps the corner of his eye on the second bird while he is dealing with the first, and kills them both in almost exactly the same place.

Always try and take the leading bird with your first barrel ; grouse coming to a butt low over the heather often appear to be flying all abreast in a long line ; but this is merely due to your point of view, and on looking at them more closely you will invariably find that they are in reality more or less widely strung out.

If you kill the leading bird with your first shot you will have time to choose and deal with your second bird before they are right on top of you.

Your second bird should always be the one following nearest to the flight of the first ; this obviates the necessity for altering your aim and turning your gun in a new direction between the shots, and there is little enough time to get on to another bird at a different angle in the few seconds it takes the grouse to cross the 20 or 30 yards of killing range, from where your first bird was shot, to where they are either all round you or too close in to the line to shoot with safety.

You must hold well over birds coming

towards you, and well under them when they are past the line: this would seem somewhat subversive of the laws of dynamics, for it is a reasonable supposition that the more under a bird coming low towards you the gun is pointed, the more probable is it that the path of the shot will intercept the line of flight of the oncoming bird. Diagrams showing this certainly appear to settle the point conclusively in theory; but the fact remains that, for some reason or other, the reverse holds good in practice, and the natural tendency on the moor is to shoot under birds coming up to the line, and over them when they have passed.

If you are only using one gun, and the birds are coming thick, it is best only to put in one cartridge at a time; you will get far more shots at a long strung out pack by working away with your right barrel at single birds, than by trying to reload both barrels.

In a drive where the birds are coming with a good wind behind them, you can

give up all idea of killing your two out of each lot in front, contenting yourself with making quite sure of one, taking him rather close in, and swinging round like lightning to take the second behind, if no further birds are coming from the front.

If birds settle in front of your butt, always make a point of firing at them, even at rather long range. Left undisturbed they will be sure to draw other birds, and the whole lot, being in sight of the butts, will probably all eventually rise together, swing back over the beaters' heads, and be lost to the drive. Grouse when fired at in the act of settling, and it is then that they are most vulnerable, are often at a loss to know where the shot came from, and may very likely rise and come straight on again.

It is hard to lay down any exact rules about the correct distances at which you should open fire, so much depends on local conditions and the time of year. You may try to take a very long shot

at a bird hurtling high through the air towards you in a down-wind drive, and find him right over your head before you manage to pull trigger; on the other hand, you will be almost sure to shoot too soon at grouse coming slowly up the wind, which are the very birds you should allow to come right up to the butt before firing.

Early in August a grouse going away from you may be comfortably killed at forty yards, but the same bird in October would take as much shot to stop him at thirty.

The one thing you can and ought to religiously avoid is firing absurdly long shots at birds going away. Chance shots will kill birds at almost any range, but the possibility of occasionally bringing off a fluke in no way justifies a deplorable and far too prevalent practice. Even if you do kill a few birds at about seventy yards, in accomplishing the undesirable feat you will certainly wound a far larger number, and setting all

humanitarian considerations to one side, you will be doing far more harm to the moor than good to the bag.

It is, unfortunately, by no means an uncommon spectacle to see a man, who in his ordinary walk of life would shrink from causing unnecessary pain to a fly, heedlessly condemning bird after bird to a cruel and lingering death by dwelling on his aim, and eventually firing at birds long after they have passed beyond effective range.

Cruelty there must be in all sport which involves the taking of life; whether such cruelty be justified by the kindness and care lavishly bestowed on the game during the rest of the year we may leave it for others to decide; but let us at least be conscious of our responsibility when we take the gun in hand, and be especially careful to cause as little suffering as may be to the bird to whom we owe so many hours of unalloyed pleasure.

You will find it difficult to remember how many birds you have down, unless



BLACKCOCK FEEDING ON THE BUDS.

you use some aid to your memory. You must know your exact score at the end of each drive, or you will either waste time hunting for imaginary birds, or else leave dead birds lying on the ground to rot.

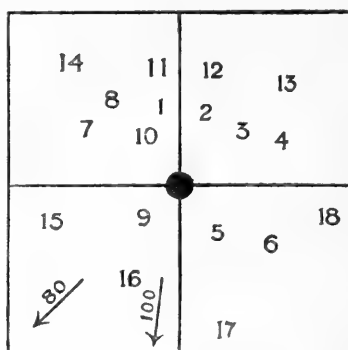
The difficulty of writing down your birds as you kill them comes in a good drive when you have your hands full, and no spare time to give to anything but shooting and changing your guns. Still, it is not hard to keep the score in your head for a short time during the heat of the fray, jotting it down in the first lull.

A post-card makes a convenient score sheet, easy to write on and to keep handy.

Divide it into four, as shown in the diagram; your butt is in the middle, and you can jot a number down showing roughly where each bird fell, using an arrow of direction for any bird which carried on and fell farther than forty or fifty yards off.

You must be careful about shooting at

low birds in front towards the end of the drive, always giving the beaters the benefit of the doubt. A stray pellet may put an eye out at 150 yards and more, and as your butt will nearly always be on the reverse slope of a ridge, you will not



see the beaters till they are quite close to you, perhaps only 30 or 40 yards away. By keeping a close look-out you will be sure to catch the glint of a flag, which will keep you aware of their movements.

Don't relax your attention till the beaters are right up to the line; there will often be birds squatted or slightly wounded, which get up at the very last

moment, giving you an easy chance of scoring if you are there and ready to take it, and have not rushed out of your butt to start picking up.

This same question of picking up is a very difficult one: you neither want to leave any birds on the ground, nor do you wish your neighbours to think you greedy.

Some jealous people display an indecent haste to make sure of the birds which fell near the frontiers of their ground, returning later to those lying nearer their butt, where they feel secure from possible trespassers.

To make picking up a satisfactory performance there must be mutual consideration and forbearance among the guns; pegs marking half the distance between butts are not really satisfactory, for in a drive with a strong side wind all your birds may fall round and beyond the butt below you, while all the birds lying round your own butt rightfully belong to the gun up-wind of you.

Pick up all the birds close round your

butt first, sending any which your neighbour killed at once to his butt, then let your dog try for the hidden birds and runners which you cannot find for yourself. If you let a dog start working when there are a lot of dead birds lying about, he gets demoralised and may give up working altogether.

Make it a general rule always to unload your gun and leave it in your butt, when you go out to pick up your birds. It is trying to see a wounded bird get up and go away, which could easily be stopped by the gun, but shooting round the butts, with so many people about, is never really safe. Of course, if you get special permission from your host, and you are sure you are not spoiling the next drive, you may quite justifiably go for a bird which was hard hit and carried on some way. But no indiscriminate poaching, please, in a case like this; confine your attention to the bird you went to look for, or you may bring well-earned censure on your devoted head.

It must be confessed that all the advice given on shooting driven grouse, the precepts to keep cool and steady, never to get flustered, and to choose this bird and that bird to fire at, are but counsels of perfection to the novice.

The flight of driven grouse is most disconcerting to those unversed in their ways : you think you are keeping a close lookout, when suddenly a bird appears within a yard of your nose, having apparently come from nowhere, or you will see them a long way in front, a long dark line against the heather, and before you know where you are, they will have silently and rapidly swept over your head and vanished into space, leaving you with a smoking gun and empty chambers, supremely conscious that you haven't ruffled a single feather, but without the vaguest notion as to which bird in particular you honoured with your attentions.

But, for goodness' sake, do not be disheartened by want of success at first; you may scarcely touch a bird the first

few days, but, with ordinary eyesight, guns that fit you and keenness to learn, it can only be a question of time; the issue is beyond doubt.

You may never, perhaps, be able to take your right and left out of a covey going fifty or sixty miles an hour downwind,—a feat to accomplish which with any certainty is reserved for the happy few who have the natural advantages of hand, eye, and arm working in perfect unison.

But, without soaring to such heights, you may feel assured that, despite initial failures, you will, with a little practice, soon attain to the moderate standard where most of us have to be perforce content to remain, able to kill your fair share of the bag under normal conditions.

Only too well can the writer recall the bitter disappointments which attended his own maiden efforts at driven grouse. Mr. Archibald Stuart-Wortley's charming work on the grouse was then fresh from the press, and how eagerly he

conned its pages before the happy day came that saw him safely packed into the Aberdeen portion of the Northern express at Euston.

Now in this treasured volume there appeared a youth, in whom he thought fondly to trace his own lineaments. The youth was young and keen—so was he; the youth knew something of shooting, but was completely new to driving—the cases seemed exactly parallel. Mr. Stuart-Wortley, in his own inimitable style, describes how he accompanied this youth to his first drive, and gently rebukes him, when it is over, for not shooting better, though careful calculations showed that the novice had only fired thirty-six cartridges for twenty-nine birds.

Without aspiring to rival such a performance, it was with hopes buoyed up that the writer started forth the following morning.

Over the sorry proceedings of that day let us draw a veil. That evening saw a wiser and sadder youth wending his

homewards way. He had been utterly at sea in every drive ; frequently it seemed impossible to get the gun off at all ; he was invariably taken in two minds, and ended by hastily shooting at the most difficult of angles ; the birds going with the wind were gone before the gun could cover them ; those coming up-wind hung in front of the butt and couldn't be hit. It was a miserable fiasco.

I fancy such days must come to most ordinary mortals in the beginning ; yet they will be surprised to find how quickly they will improve with a little practice.

CHAPTER IX

BLACKGAME

ALONE among our game-birds the blackcock may with fair justice complain of his treatment at the hands of man. From his first moment to his last the pheasant is entertained like a king; nor can the grouse or the partridge cavil at the care and trouble so freely given to them in these days of high preserving.

All, save only the blackcock, flourish under laws framed to allow them to attain their full growth and powers of flight before they are called on to face the music of the guns.

It is only to the noblest of them all that fair play is denied; his favourite haunts are either swept away before the advance of agriculture, or he is ousted

from them by the intruding pheasant ; he more often falls a victim to the poacher than any of his congeners ; and our game laws admit of his being done to death at a time when very decency would seem to forbid any intrusion on the privacy of so fine a gentleman.

For the blackcock undergoes his moult in the middle of July, parts with the lyre-shaped tail so familiar to all, and, like Samson, there goes with his crowning glory all his strength and pride. No longer does he move through the world with that fine air of bravado we are wont to associate with him at other seasons of the year ; he now seems broken in spirit and thoroughly ashamed of his sorry condition, and the opening of the shooting season finds him skulking in patches of bracken and shaggy heather, his womenkind still occupied with the cares of families of half-grown poults, and himself very unwilling, except in the direst extremity, to take wing and expose his nakedness to view.

It is then only too common an occurrence for him and his whole house to go to swell the bag of the eager lessees who rent so many of the moors where blackgame dwell. It savours more of slaughter than of sport, the massacre of blackgame in some thick patch of bracken on a hot, August day, when the shooter opens by plastering the hen as she flutters up at his feet, and slowly works through the rest of the family till none are left.

Not till the middle of September do the young blackcocks reach any degree of maturity; only then do they lose their nestling plumage, their tails begin to spread, and, drawing apart from the greyhens of the brood, they live in solitude, while their strength and cunning grow apace.

By the end of the month they commence to gather in packs, the old cocks come out of their eclipse, and you would be put to it to recognise in the handsome, glossy plumaged, bold-flying bird the timid skulker of but a month

past. But ere he has come to his stature the tide has set southwards again from the moors, and thus many who may claim to have shot, or rather murdered, blackgame in scores, really know nothing at all of the wildest of our game-birds.

Most sportsmen and lovers of nature hailed with warm approval the introduction by Viscount Dalrymple into the House of Commons last session, of a bill to postpone the opening day of the blackgame season for a month ; but every one is clamouring so loud for their rights just now, that it is to be feared the rights of the poor blackcock will be overlooked.

To be fair to all parties, the blackcock should first be shot about the middle of September, and he should go out of season with the year. Blackgame stay on the high moors till the beginning of October, feeding on seeds, blaeberrys, cranberries, and various fruits of the moorland. But once the corn is led on the arable lands adjoining the moor, they leave the higher

ground in a body and betake them to the stubbles.

On shootings which consist entirely of moorland, toll must be taken of the blackgame by the early days of October, or they will be lost to the moor for the season, for they probably will not come back to the heather till the stubbles are ploughed and the year is nearly out.

Just before the young blackcocks begin to collect into packs is the best time to shoot them over dogs; from the third week in September onwards they are to be found scattered singly all over the moor. Though they lie very close in the faces of bracken or clumps of rushes and white grass, and offer a poor mark for the gun, still they certainly take a lot of finding, giving ample scope for working dogs to advantage.

But to enjoy the sport at its best you must stay your hand yet another month, and then seek the lower ground where the black land merges into the white, where rough pastures of rank grass, rushes and

heather, oat stubbles and turnip fields, and straggling patches of birch, hazel, and rowan, or more formal plantations of young fir and larch, encroach on the confines of the moorland proper.

This pleasant border land is no fit stage for the set pieces of shooting; loaders, luncheon tents, and ladies would be as out of place here as a life guardsman's trappings on a predatory Cossack, but it is the country of all others wherein to wage the guerrilla warfare of sport.

Here the element of uncertainty reigns supreme; you never know what will happen next, and the inevitable days of hard work and little result will but serve to enhance your pleasure, when everything does come off, and in the evening you mark with a white stone in your calendar a day such as I would now attempt roughly to portray.

It is mid-October, and as you step out into the fine, crisp air of a Galloway morning you cheerfully consider the prospect of the day, or regretfully call to

mind that only to-morrow the country must once more give place to the city, the clean, wholesome fragrance of a north-country morning to the acrid smell of the wood pavement, and the homely salutation, in purest Doric, of the old man raking the gravel to the cockney twang of the clerk in your office.

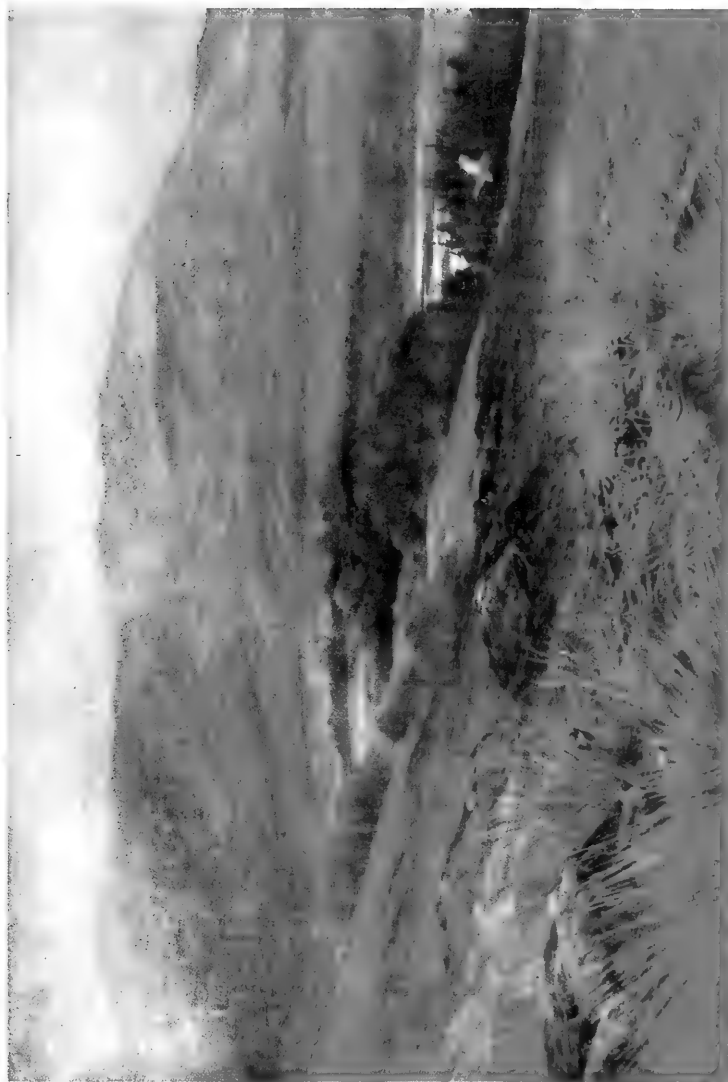
But the sound of wheels disturbs your meditations, and you turn to meet your host, who has been pacing the lawn in consultation with his factor, and now hurries across to see to the safe disposal of guns, cartridge bags, coats, and sandwiches.

Taking the reins from the groom, he swings himself on to the box-seat of the dogcart, bids you mount beside him, and presently you have rounded the ivy-clad walls of the old pele tower, standing on the still older mote-hill at the foot of the long avenue of limes, rumbled over the wooden bridge which spans the reed-fringed outlet of the loch, and are skirting the wooded shores of a wide expanse of water.

The road follows with devious windings the vagaries of miniature headland, promontory, and bay, and the still surface mirrors the pale beds of flags and rushes on the water's edge, the bolder, deeper, outlines of the clusters of noble pines behind, and the long slopes of woodland and pasture receding into the misty shadows where the rugged hills dominate the whole picture.

The illusion is complete, save only where it is broken by the widening circles of a rising trout, or shattered into lines of molten silver by the stampede of a family of startled coots: skeins of mallard and widgeon take flight and rise in a series of graceful evolutions against the clear sky; while under the overhanging bank of a streamlet from the hills you surprise the tall, stiff form of a heron, standing, Narcissus-like, lost in a rapt contemplation of his own reflection.

You feel at peace with all the world, and your thoughts wander idly through the varied happenings of the past few days.



What a pleasant holiday it has been !

They came as a welcome surprise these days of grace, long after your regular autumn holidays were past and gone. At first you were in some doubt how best to use the time, till you recalled the hearty invitation to come whenever it suited you best, and take your chance of such stray sport as might offer. Your tentative wire brought a cordial reply, and the result has been a week which will long live in your memory.

The weather, for one thing, has behaved itself in a manner little short of exemplary, which cannot always be said of it on the west coast of Scotland. There had been rain and to spare the week before, and the river was still "fishing" the morning you arrived, and before she ran out at noon you had grassed two good little salmon, of eight and ten pounds, among the curlews, godwits, and peewits which haunt the sandy wastes of the estuary.

That afternoon you followed a brace of

black cocker-spaniels, who quartered their ground in the most approved fashion, and shot some six score of the most sporting bunnies it has ever been your good fortune to meet with, in the jumble of whins, bracken, and rocks on the rough hill-side above the house, the occasional woodcock or snipe lending a pleasing variety to the bag.

The next day was certainly blowy—if half a gale from the south-east with scuds of sleet off the sea may be so lightly described—but you had little reason to find fault with weather so admirably suited to the work in hand, for that was the day you killed close on two hundred wood-pigeon coming in to feed on the mast under the beeches in the park.

What splendid shots they gave coming up-wind over the tall trees, and how absurdly pleased you felt with the open-mouthed astonishment of the young keeper who came to pick up for you, when he saw the bare ground under the

beeches carpeted with the blue of the slain, and you brought off a pretty right and left right under his nose, the second bird a real teaser, swinging away with the wind.

The next two days were given to more regular shooting; the services of two neighbours were enlisted, and while the first day was spent among the partridges and outlying pheasants in the almost English surroundings of the roots and stubbles, belts and strips of the low ground, the next, in striking and agreeable contrast, saw you on the high, bleak tops of the moorland, outwitting with some measure of success a race of ancient grouse, who came up from the lower moors to evade the regular driving of August, and were dwelling here in a fancied security.

But while your thoughts have been wandering afield, you have left lodge and loch, park and policies, far behind and below you, and are toiling up a steep, sheltered glen, where lofty spruce and

Douglas fir meet in a dark canopy overhead. Soon you emerge into the open moorland beyond where the old coach road, little used since the railway came to take its place, degenerates into an unfenced, grassy track.

The road descends again; the spreading valley of a river comes into view, and the keepers and dogs can be seen waiting your arrival on the roadside. A small array to-day; only four keepers and two hill boys, for blackgame treat with contempt any attempts to organise them into regular drives, and will probably leave the ground altogether if attacked by an army of guns and beaters with all the paraphernalia of regular driving.

Macfarlane, the head-keeper, whose sixty winters sit lightly on those broad shoulders and hard-knit frame, is as keen on a day of foray and raid as any of us, and there is a glint in his eye which bespeaks business, as he reports that there are a big lot of blackgame in the blown-out wood below the whinny knowes, and

suggests that the guns should take the time-honoured passes above the standing-stones and have half the wood driven up-wind to them. Watches are produced and compared, and it is agreed to start the drive at ten o'clock, which will give you forty minutes to make the necessary detour and get into your places.

Hurriedly, for you are rather excited, and anxious to waste no time, you fill your smaller cartridge bag and sling it over your shoulder, give the larger bag with your reserve ammunition to be put with the lunch in the panniers of the pony, and follow your host on the rough sheep-track, which winds down the steep braeface to the river, whose twistings and turnings at least double the mile to be traversed before you face the hill-side again.

A stiff pull up an open glade in the wood, knee deep in bog myrtle and juniper, and your host has placed you, rather hot and out of breath, almost within shot of the moorland above,

taking his own station some thirty yards below you. Blackgame are wonderfully consistent in their line of flight, and though you are so close together, you will find that almost every bird the keepers disturb will give a chance to one or other of you.

What a gale it must have been that nearly swept this wood out of existence, just a quarter of a century ago you estimate, for while groups of larger Scots fir and larch still stand to mark the older woodland, most is of a younger growth, sent by nature to repair her own havoc.

There was a sharp frost last night, the leaves are turning, and the golden spray of the birch, the brilliant reds of rowan and gean, and the deep green of the alder, make a beautiful contrast of colour in the bright sunlight.

Above you, on the moor, the grouse seem to have been deluded into thinking that spring has come; the cocks are holding concert on every hillock and knowe, and as their clear, loud note rings sharply through the frosty air, and you

turn towards the sound, you catch a glimpse of a cock hotly pursuing his lady love, low over the heather, till they are lost to view behind the ridge, only to reappear high in the air, still doubling and turning together till they are lost to view.

A low warning whistle from your neighbour recalls you to the work in hand, and you grip your gun expectantly as you discern shadows bearing straight down on you through the wood.

Ah! you very nearly made a blunder; those were a dozen greyhens, and though the sun was a little in your eyes, you would never have heard the last of it if you had shot a brace of ladies, which you certainly would have done your best to do had it not been for the timely "ware hen" of the other gun.

There is a fine of ten shillings imposed here for the death of a greyhen, and vigorously enforced, the proceeds being devoted to local charities. A praiseworthy custom, for greyhens should never

be shot in the autumn, for though they become infertile after a few years, it is impossible to discriminate between barren hens and the future mothers of families.¹ A single bird sails over the tall firs behind which you are standing—another greyhen—no, a young blackcock—but you were too long making up your mind, and though you struck him hard with both barrels after he had passed—hard enough to have brought down any bird, you would have thought—still he would have passed out of sight, and perhaps carried on for miles, had your neighbour not brought him down with a beautiful long crossing shot, just as he was topping the trees on the far side of the clearing. He supplements this kind attention with a splendid double shot from a big lot that come between you, out of which you manage to get one too, though it takes both barrels to dispose of him finally,

¹ Mr. Millais recommends, in his *Natural History of British Game Birds*, that all greyhens attending the "lek," or playing ground, after the middle of May should be destroyed, for by then all productive hens will be nesting.

your first shot only serving to retard his progress.

“Shoot at his head as if it was a snipe, and think what an easy snipe it would be.” You repeat to yourself this advice that some one once gave you as you eject the empty cases, and vow you will be well ahead of the next one.

Nor have you long to wait, for blackgame are real vagabonds, here to-day and gone to-morrow, and to-day all the cocks of the countryside seem to be collected in this twenty acres of wood. You make no mistake about the next bird, a real old veteran; taken in the right place, well in front of you, he crumples up at once, and comes down crashing through the branches to fall at your feet.

This gives you confidence, and though you cannot hope to vie with the practised hand below, who kills bird after bird so neatly and cleanly, without any seeming effort, still you are shooting well above your average, and doing fair execution

among the long, strung-out pack which is streaming over. For a minute or so you are loading and firing as fast as you can, then the birds stop coming, the drive is over, and you can hear the keepers coming through the wood.

Something like two hundred blackgame must have come over, most of them cocks, of which your host's Labrador and Macfarlane's less showy but equally serviceable "curly" account for eighteen on the spot. There are still two certainly to pick, which you saw to the ground some two hundred yards back into the wood, and three others that seemed very hard hit, but carried on out of sight. The latter you have probably lost, for a wounded blackcock has amazing powers of recovery, gaining strength as he flies, and they may be miles away by now; but Macfarlane will have a hunt for them at the far end of the wood, and will try for the two dead ones as the drive comes in, for he thinks that, if he "brushes in" some rough fields and a part of the moor-

land above, he can give you a return drive by bringing the rest of the long straggling wood back to the guns.

But it will take the men the best part of an hour to get round, so there will be plenty of time to go down and try that swampy patch of reeds by the river for a teal or a snipe, or possibly both, and get back to your places before the drive proper begins.

Luck is undoubtedly with you to-day, for as you steal quietly along the edge of the reeds, one along each side, three mallard rise from the shallows between, of which only one makes good his escape. One is only winged, and as the dog plunges in to secure him, half a dozen snipe rise scap-ing from the far end. One falls to your double discharge, a very long shot, and two jacks, rising at your feet, fall easy victims. The drier rushes beyond furnish a hare and two or three rabbits, and as you retrace your footsteps to the wood, a shadow falls across your path, and you look up just in time to

make a pretty shot at a high pigeon, who comes down in a series of Catherine wheels.

Not nearly so many blackcock come back this time; the main pack does not appear at all, and most of what do come are single birds. A roebuck comes tripping up to where you stand, and you are obliged to harden your heart and shoot him. You feel much relieved that he falls dead to the shot, for it is always an unpleasant performance with a shotgun, albeit necessary, for he works terrible mischief in the young plantations.

A woodcock, at the end of the drive, forms a more pleasant interlude, and adds an unexpected variety to the bag, for the foreigners have hardly begun to arrive yet, and the home-bred birds are few and far between.

When the drive comes in, Macfarlane reports that the main body of the blackgame took right across the valley on being disturbed, a long flight, for it is nearly two miles to the far side. He

has found three birds from the first drive coming along, which brings the total up to twenty-eight for the two drives.

An improvised grouse drive on the moor above yields a few brace of grouse, after which you eat your sandwiches in one of the butts, washed down with a modest allowance of Long John, tempered with cold spring water, with just an "eke" of the pure spirit to finish up with.

The next half-hour is not the least pleasant of the day, for the autumn sun is hot, the heather dry and fragrant, and it is good to lie full length on your back, and follow the flight of a pair of buzzards who rise in sweeping circles till they seem mere specks against the blue, or idly mark how the cloud shadows are chasing one another along the rounded slopes of the distant hills.

But the day draws on, and, half-unwillingly, though you would be the last to admit it, you rise, shake yourself, knock out your pipe, and start on the

good hour's walk which will take you across the valley and up to those sunny stubbles on the far side, where the black-game are sure to be feeding.

Nor are your hopes misplaced, for as you pass through the "steading" of the white-harled hill farm, the slopes of the fields above look as though they were covered with a flock of rooks.

To gain your stations for the drive, which is settled in a hasty council of war, entails moving with circumspection, for you have to pass close under where the birds are sitting, and a false move would bring you into view of one of our keenest sighted birds, and spoil the whole manœuvre.

But all goes well, though there was one breathless moment when it looked as though an old blackcock had picked you up, as he craned his neck forward suspiciously; but you outwitted him successfully, and ten minutes later are crawling up the old ruinous dyke to the gateway which is to be your stand.

Cautiously peering between the stones, you see what looks like great black turkeys strutting about, not fifty yards in front of you, while the low dyke dividing the two stubbles has a living black coping its whole length.

Soon the first cock rises off the dyke and flies low between you ; he is allowed to pass in peace, to make sure of the big lot coming on, and your forbearance has its reward, for a minute later a great black mass is bearing down upon you.

You find it very different shooting to the drives of the morning ; then the birds were thirty feet or more above your head, and could be taken more or less coolly, like ordinary pheasants. This time it takes all your powers of self-control to keep your head and subdue your wild desire to let drive into the thick of them, as they come low over the stubble and rise to the dyke within a few feet of your gun.

You grip your gun like a vice and clench your teeth to steady shaking hand

and beating heart, and somehow manage to do the right thing, taking only birds in front and close up to you, and trying to concentrate your attention on each one as he comes up and forget all the others around you. Four have struck the dyke in front of you, all dead, before you swing round and get a lucky shot which just breaks the wing of the last of the retiring pack. After such a disconcerting quarry, the odd grouse and brace of moorland partridges that come later seem small fry indeed, and are disposed of without any difficulty.

The other gun, higher up the dyke, only had a chance at the outskirts of the pack, and has only two down, but accounts for a brace of cock pheasants making for the valley below, and nicely up in the air.

Two more drives follow, one off another lot of stubbles on the adjoining farm, and a final round up off the roosting ground on the rough borders of the moorland above. In the failing light of the last

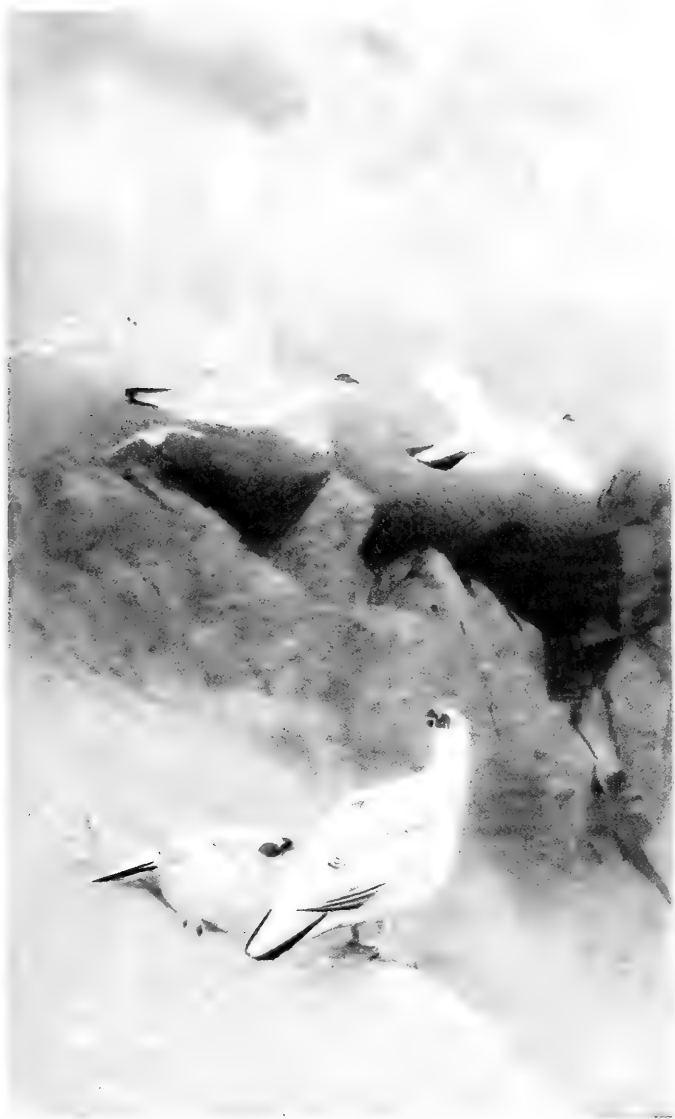


PLATE 1. S. M. L. 1911.



drive, when birds are very hard to see at all, it is your host who makes the first mistake of the day, and "downs" two greyhens. As you walk down the hill-side to the farm-house, where tea, scones, and heather honey await you, you subject the "lady killer" to much light-hearted chaff, which he takes in good enough part, though well he knows that "murder will out," and that he will be mercilessly taken to task by the old laird at dinner this evening.

The game is laid out under the red-tiled porch of the farm-house, and as you get a fragrant Havana under weigh, and wrap up warm against the long drive home, you agree that fifty blackcock, of which all but two are cocks, with complement of grouse, partridges, pheasants, mallard, snipe, woodcock, pigeon, hare, rabbits, and a roe, make as pretty a day as the heart of man could wish for.

Such a day is still to be enjoyed in a few favoured localities when the fates are

kind, but many of the former strongholds of the blackgame now know them no more, or only in sadly reduced numbers.

Many reasons can be adduced to account for this lamentable decrease, besides the untimely date on which they can legally be shot, which has already been referred to. In some districts excessive poaching, to which their habits render them peculiarly liable, and the over-prevalent custom of shooting greyhens, have undoubtedly much to answer for, while in others the changes in the nature of the ground they chiefly favoured through young woods growing up and the drainage of modern agriculture must have helped to drive them away. Heavy toll is taken of them, too, by tenants and occupiers of small strips of cultivated land adjoining the moors, whose stooks and stubbles draw every bird in the countryside after harvest.

Time was when blackgame were to be found in almost every county of England; now they are dying out in all, except in

the northern Border counties. They are shrinking in numbers throughout the Highlands and Central Scotland, though in Galloway and the Border counties they seem better able to hold their own.

The figures of the best years on the Duke of Buccleuch's Drumlanrig Castle estates in Dumfriesshire have been quoted before ; but as, alas ! they may never again be approached, these totals may be safely given as records for all time :—

| | | |
|------------|------|--------------|
| 1861 . . . | 1586 | } Blackgame. |
| 1865 . . . | 1530 | |
| 1869 . . . | 1508 | |
| 1870 . . . | 1486 | |
| 1871 . . . | 1429 | |

The best individual day on the Duke's ground was 247 blackgame (of which over 200 were cocks) to eight guns ; which is also the largest number of blackgame recorded to have been killed in one day in the British Islands.

Fifty brace of blackgame in a day is now a rare feat, though it has been accomplished at least twice of late years

in widely separated localities—once on Lord Lichfield's moor at Cannock Chase in Staffordshire, some ten years ago, when a party of guns killed over the hundred, and again on the Earl of Stair's estates at Lochinch Castle in Wigtownshire, where Viscount Dalrymple, shooting over Barnshangan moor with a party of five other guns, in October 1905, killed 111 brace of grouse and 105 blackgame (almost all of which were cocks), besides 20 brace of partridges and six other varieties of game. But these are exceptional days; most of us must be content to meet the blackcocks only as an occasional incident in those charming days of varied sport which only the borders of the moorland can provide, and the writer is tempted to conclude the chapter with a day from his own gamebook, in which, although blackgame do not figure largely in point of numbers, their addition to the bag was one of the outstanding features in what one of the guns not inaptly termed "a glorified poach."

| DATE. | PLACE. | Grouse. | Blackgame. | Partridges. | Pheasants. | Hares. | Rabbits. | Woodcock. | Snipe. | Wild Duck. | Teal. | Wood-Pigeon. | Golden Plover. | TOTAL. | REMARKS. |
|-------------------|------------------------|---------|------------|-------------|------------|--------|----------|-----------|--------|------------|-------|--------------|----------------|--------|-----------------------------------|
| 1909.
Nov. 29. | Dowalton,
Monreith. | 11 | 2 | 57 | 97 | 66 | 21 | 16 | 11 | 2 | 1 | 3 | 3 | 290 | Six guns; Roe
and wigeon seen. |

Let those then who must, from want of time or other reasons, shoot their blackgame, as the law allows them, in August and September; but let those who would see our noblest and wildest game-bird at his best, wait till the first snows are on the hills, and the hoar-frost lies white on the heather, till—

Bright October is come, the misty bright October,
Bright October is come, to burn and glen and
cottage.

CHAPTER X

PTARMIGAN

THE home of the ptarmigan, most graceful and beautiful of our native game-birds, lies among the high tops of our Highland hills, where the winter snows linger through the summer,—bleak solitudes of bare rock, scattered boulders, and precipitous slopes of shifting mountain débris.

Far above the region of heather, the only vegetation is a scant growth of wan grass, mountain berries and moss; and it might well baffle any but a naturalist to say how this fine bird contrives to pick up a living in these inhospitable wastes.

The charms of a day after ptarmigan lie not so much in the actual shooting, as

in the strange and unfamiliar surroundings in which the scene is laid.

The wild scenery spread out like a map beneath—on one side a sere waste of moorland, studded with gleaming silver lochs, on the other a confused jumble of mighty peaks and ridges ; the cold, clear sunlight and heady mountain air ; the ever-changing effects of drifting cloud and clinging mist, cannot fail to rouse some feeling of exhilaration in the most unimaginative of mortals before ever a shot has been fired.

The usual way of pursuing the ptarmigan is simply by walking after them ; but little organisation of the day is necessary, or indeed feasible, and the chief qualifications which make for success in this sport are a sure foot and a sound wind.

Pointers and setters are rarely likely to be of much assistance, for the tops usually swarm with blue hares, which prove very distracting to the best of dogs, and the nature of the ground and absence of

holding cover make it comparatively easy to find the birds for yourself.

I say comparatively advisedly, for no bird is harder to pick up, and the untrained eye of the Southron may fail to detect one single bird out of a whole covey crouching among the lichen-covered rocks not ten yards from his feet, so closely does their plumage assimilate with their surroundings.

The keen, trained eye of the gillie or stalker who is with you must be trusted to make good your deficiencies in this respect, and though this may be rather humiliating, it is part of the price we have to pay for the artificial life of a highly civilised community.

In fine weather the covey usually squats until you are close up to them, when they begin running about among the rocks, to all seeming as tame as chickens in a farmyard, giving the impression that they will be only too easy a mark for the gun when they do get up. No bird, however, gets quicker under weigh,



PTARMIGAN ON SCHIEHALION.



and as they all rise in a bunch and swing away round the hill, it takes good and quick shooting to kill a neat right and left without any firing into the brown, which, though likely to be effective enough as they rise, is a cruel and unsportsman-like advantage to take.

On the broken and often dangerous ground to be traversed, where a false step may mean a fall at any moment, the gun must be carried with a primary view to safety rather than with any thought of quick snapshooting.

Far better miss a few chances than take risks which may easily result in an ugly accident. As the ptarmigan, when flushed, usually betake themselves to some neighbouring top, to which, while they reach it easily in a few minutes, it would take you almost as many hours to follow them, a few gillies, when available, posted on various tops to keep the birds moving, may be found very useful.

In fine weather the ptarmigan usually

lie very well, and as many as sixty brace have been killed by one gun in a day. In rough and broken weather they become almost unapproachable, every covey rising wild and far out of shot; and, indeed, on a bad day it is better not to take the hill at all, for, apart from the doubtful chances of any sport, the tops are not only the reverse of pleasant, but can be really dangerous going in thick and misty weather.

The best ptarmigan ground lying in strictly preserved forests, where all else must yield to the necessity of avoiding any disturbance of the deer, shooting is usually confined to an odd day before and after the stalking season.

Driving can be rarely resorted to with success, the physical obstacles being usually unsurmountable, and the stock of birds on any particular hill rarely sufficient to warrant the attempt.

On one occasion the writer took part in an extemporised drive which proved a great success, but the lie of the ground

was somewhat exceptionally favourable to the attempt.

Beinn Bhreach, on Corrour forest, stands alone in its sombre grandeur, a wide expanse of level moorland isolating the mountain from the surrounding hills. Hence one may, from its double top, see far on every side—from Schiehallion to Ben Nevis, from the precipitous shores of Loch Treig to the long, low ridges of Rannoch Moor.

On a certain glorious day in October this same peculiarity, which so enhances the scenic effect, stood us in good stead in other ways.

The morning had been spent in walking the birds, but they proved most unconscionably wild, and though the tops seemed alive with them, purring and chuckling on every side, by lunch-time, though we had slain a vast number of blue hares, only a paltry two brace of these graceful birds adorned the bag.

The drive which was then tried was simple in method; the three guns lined

the boulder-strewn neck connecting the two peaks, while the half-dozen of gillies and stalkers divided into two parties, each devoting their attention to keeping the birds off one of the tops.

We had not long to wait; the last beater had hardly passed from our sight before a glint of white wings aslant the sun announced the advent of the first covey.

Ensued an hour of beautiful sport; the shooting proved exceptionally difficult; the mere fact of having birds coming from front and rear at once is not conducive to accuracy, and when, in addition, such an infinite variety of shots were presented, some sailing high and straight overhead, others hugging the hill in baffling curves, it may be readily understood that there was little proportion between the numbers of slain and the little heap of empty cases which adorned each rocky fortalice where a gun had been ensconced.

After a while the ptarmigan would no

longer face the valley of death; the retreat was sounded, and close on forty brace of these birds, in their lovely autumn dress of silver-grey and white, were laid out among the lichen-covered rocks, so beautiful in death as almost to make one regret the predatory instinct of man.

CHAPTER XI

STATISTICAL

RECORDS, *per se*, have little to recommend them; and the whole business of record making and breaking is somewhat distasteful. Yet viewed in their proper light as an adjunct of sport, and not as an end in themselves, they certainly are not without interest.

To know that A killed a hundred brace of grouse over his own dogs under normal conditions is an interesting testimony to the progress of the moor; though to know that B, bent on going one better, rose at daylight, and by using four times as many dogs and riding up to every point, succeeded in killing a hundred and one brace on the adjoining moor, ceases to be of any real value whatever. In the one case, the

fact that the hundred brace was reached was an unexpected addition to the general pleasure of the day, which lay in the legitimate sport of seeing dogs work and fair shooting. Had the total been only ninety brace, A would probably have enjoyed himself quite as much, whereas in the case of B, a few birds less in the bag, and the day, from his point of view, would have been a failure.

So we may lightly pass over such feats as one gun killing 500 brace of grouse in a single day, or another killing nearly 200 birds in twenty minutes, as tending to rouse a spirit of emulation which we hold to be at variance with the true interests of sport.

There are individual records, too, which we would be loth to part with: we like to read how that fine old sportsman, Captain Horatio Ross, killed 83 grouse in 83 shots, shooting over dogs on the 12th August 1892, the same being his 69th shooting season. Such a feat as this would not seem to invite competition, for few old gentlemen of eighty are likely to try

to rival it. Further, the statistics of a number of moors over a period of years are of real value. They rouse no desire to outshine others in individual performance, and while they serve faithfully to mark any advance in this branch of sport, they can but act as a wholesome incentive to others to earn new rewards by bestowing more care and attention on their own moors than they have heretofore received.

A certain historical fitness attaches to the earliest record of shooting the grouse. Among the present generation, Mr. Rimington Wilson of Broomhead has justly earned an unrivalled reputation alike for his science in managing a moor as for his skill in the butts.

It was another Wilson of Broomhead to whom, in the middle of the seventeenth century, is attributed the distinction of being the first to shoot grouse on the wing. The results on this wonderful little moor of but 4000 acres have been too often quoted to bear recapitulation.

It is usually driven but twice a year, with only one day's interval ; and it would be well if many keepers could watch the consummate skill with which vast numbers of birds are manœuvred on so small an area. For the past seventeen years the first day's driving at Broomhead gives an average of 900 brace, and here on August 24, 1904, there fell to nine guns no less than 2743 grouse.

A century ago grouse must have swarmed in the Highlands. Colonel Thornton writes of seeing 3000 in a pack, and in the papers of the day references such as the following may be found :—

Shooting in September, the present Year 1817, at the Earl of Fife's in Mar Forest, notwithstanding the incessant rain, the list of slaughter during one week beside red Deer, Roes, and Ptarmigan, amounted to 821 brace of Grouse, and the Marquis of Huntly's Party shot upwards of 1100 brace of Grouse. The accounts do not state whether Forsyth's fulminating lock or any new contrivance was resorted to, which resists the water.

Thirty years later Colonel Campbell of Monzie's days of $184\frac{1}{2}$, 191, and $222\frac{1}{2}$ brace over dogs, bear witness to no diminution in their numbers.

Then came the famous year of 1872. In that season enormous numbers of grouse were killed on highlands, of which some estimate may be formed when we note that 7000 birds were killed on Dalnadampf by driving, 10,600 at Glenbuchat over dogs, while individual days produced totals such as 220 brace to one gun at Grandtully, and 327 brace to three guns, shooting separately, on Glenquoich. A decade of regular driving had, by then, brought the Yorkshire moors to their best, and there even more surprising results could be shown.

On no less than five Yorkshire moors, in that season, there were killed over 1000 brace in a day ; while at Wemmergill and High Force the season's total reached 17,074 and 15,484 birds respectively, the latter figure representing the products of nineteen days' driving.

In that year the productiveness of moors seems to have touched high-water mark. Since that bumper season the Yorkshire moors have held their own, and show no signs of lowering their high level of production. On the other hand, they have made no farther advance, which still requires explanation, for having improved to such an extent there seemed no limit, save that of food-supply, to further progress.

In the Highlands this problem presents itself more forcibly, for despite the general spread of driving and the adoption of all the modern methods of preserving, the general stock of birds seems, if anything, to be on the decrease, for moors like those of Moy and Cawdor, where 3000 and 4000 brace have been killed in a season, can only be regarded as brilliant exceptions to the general rule.

It seems there is some limit set to what a moor will produce, a limit not regulated by food - supply alone, and varying to a marked degree in different districts.

Be the reason what it may, the fact remains that while on some exceptionally favoured moors a bird to an acre may be killed in good years, others under the best management and most favourable conditions seem unable to yield a better average than one bird to every four or five acres.

Yet the last thirty years have seen a marked improvement on Lowland moors, where better management and regular driving have brought moors, which formerly were but little thought of, to rank only second to the best of those across the Border.

Some of the Welsh moors, too, have improved to a great extent. Mr. J. G. Millais, in his *Natural History of British Game Birds*, supplies some interesting and hitherto unpublished figures of Mr. Wynne Corrie's ten years' tenancy of the Ruabon mountains; and as the pages of this sumptuous volume are not accessible to all, they may be given here :—

| Season. | No. of Grouse killed. | Remarks. |
|---------|-----------------------|---|
| 1898 | 787 | Best days, 647 and 580 brace. |
| 1899 | 2364 | |
| 1900 | 4016 | |
| 1901 | 6682 | |
| 1902 | 4740 | Best days, 760½ and 781 brace. |
| 1903 | 2189 | |
| 1904 | 4206. | Best days, 638½ and 554½ brace. |
| 1905 | 5525 | Best days, 554½ and 507 brace. |
| 1906 | 4301 | Making a total of 42,901 birds in 11 years. |
| 1907 | 3643 | |
| 1908 | 4448 | |
| | | |

Taking it for granted that these figures had never been approached in previous years, this moor seems to have yielded very quickly to good management, and Mr. Wynne Corrie gives to his head keeper, Allan Brown of Pen-y-Car, the character of being the most skilful manager of grouse he has known. The Ruabon mountains are under sheep, and the area of grouse grounds comprises about 7000 acres.

It is through the courtesy of Lord Dunglass that I am able to give the statistics of the Earl of Home's moors at Douglas Castle in Lanarkshire, which are of singular interest, since they show the progress of a moor which has been regularly driven for half a century. If the figures of these fifty years be divided into two equal periods, it will be seen that while isolated seasons yield high totals during the first half, it is not till the second period that a high average is reached and maintained.

| | |
|-----------------------|-----------------------|
| 1858 . . . 920 grouse | 1873 . . . 170 grouse |
| 1859 . . . 1405 „ | 1874 . . . 549 „ |
| 1860 . . . 1377 „ | 1875 . . . 1482 „ |
| 1861 . . . 1286 „ | 1876 . . . 3382 „ |
| 1862 . . . 772 „ | 1877 . . . 3060 „ |
| 1863 . . . 812 „ | 1878 . . . 1740 „ |
| 1864 . . . 1998 „ | 1879 . . . 2162 „ |
| 1865 . . . 3618 „ | 1880 . . . 1500 „ |
| 1866 . . . 5942 „ | 1881 . . . 2136 „ |
| 1867 . . . 208 „ | 1882 . . . 3316 „ |
| 1868 . . . 336 „ | 1883 . . . 1055 „ |
| 1869 . . . 1049 „ | 1884 . . . 1664 „ |
| 1870 . . . 2107 „ | 1885 . . . 3285 „ |
| 1871 . . . 4370 „ | 1886 . . . 5588 „ |
| 1872 . . . 4073 „ | 1887 . . . 4439 „ |

| | |
|------------------------|------------------------|
| 1888 . . . 4547 grouse | 1899 . . . 3701 grouse |
| 1889 . . . 1974 „ | 1900 . . . 5285 „ |
| 1890 . . . 4057 „ | 1901 . . . 4740 „ |
| 1891 . . . 3174 „ | 1902 . . . 3660 „ |
| 1892 . . . 3904 „ | 1903 . . . 3043 „ |
| 1893 . . . 5648 „ | 1904 . . . 3140 „ |
| 1894 . . . 5638 „ | 1905 . . . 3550 „ |
| 1895 . . . 4908 „ | 1906 . . . 4060 „ |
| 1896 . . . 6745 „ | 1907 . . . 4627 „ |
| 1897 . . . 1368 „ | 1908 . . . 3969 „ |
| 1898 . . . 2983 „ | 1909 . . . 4604 „ |

The total extent of grouse ground is 26,000 acres. I am further indebted to Lord Dunglass for the following notes on the above figures :—

Driving was first instituted by the keeper Amos about the year 1859. Guns at first used to line burns, peat-hags, etc., till gradually butts were put up.

In 1866, two days of over 200 brace were recorded; but in the following years the moor suffered severely from disease.

Of late years there has been no outbreak of real “disease,” though large tracts of heather have been destroyed by

the ravages of a small beetle (*Lochmaea suturalis*), and late spring frosts have spoilt many nests.

A certain number of dead grouse are found every April, and usually a number of old blackcocks, probably weak birds who have failed to thrive through the winter. The ground is all under sheep, and mostly heather and grass together, there being little solid heather on any of the beats.

On Netherton beat, which comprises 2500 acres of heather, 380 brace were killed in a day's driving in 1896, and 438 brace in 1907.

Among the most prolific moors in Scotland are those on the Dalhousie estates in Forfarshire, of which the Earl of Dalhousie has kindly furnished me with the following particulars :—

Hunthill extends to 26,000, acres; on the Cairntrench beat of this moor, Captain Tomasson, using only one gun, shot $135\frac{1}{2}$ brace in a day over dogs in 1897, and on another day in the same

year, with two guns and a loader, killed 229½ brace on Tullybardines.

The best day's driving so far recorded is 402 brace, and in 1888 the total bag amounted to 14,092 grouse.

Invermark comprises 24,000 acres of grouse ground. On this moor, in 1870, three guns, shooting separately over dogs on August 12th, killed 163½, 120, and 118 brace respectively, while in 1872 Major Young killed 182½ brace to his own gun in a day. In 1888, during the tenancy of Lord Hindlip, 10,000 grouse were killed in the season. Here the most successful day's driving produced 447 brace in 1906.

On Gannochy, another of the Earl of Dalhousie's moors, driving has been practised for many years. The most interesting figures connected with it are the wonderful bags annually killed on the "Punchbowl." This beat is driven, on an average, six times every season, and though no day of 400 brace has ever been realised, for twelve years, or 72 days'

driving, the average works out at $176\frac{1}{4}$ brace a day.

Statistics such as these, showing how promptly the stock of grouse responds to the intelligent management of the ground, should be a standing incentive to the owners of moorland to adopt all means in their power for the production and protection of this charming species of game ; which, besides its excellence on the table, and its value as providing the most highly prized form of shooting, enjoys the distinction of being the only wild animal exclusively indigenous to the British Isles.

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